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ABSTRACT

The plan reviews work on projects initiated by the Office of Education and transferred to the National Institute of Education (NIE) and offers a status report on major program areas. It discusses some of the questions in career education, including the problems it addresses and efforts to date. Proposed program goals are to improve knowledge of the relationship between education and work and to increase education's contribution to individuals' abilities to attain satisfying careers. Related strategies are also delineated. The attachments contain a statement of the National Institute of Education regarding its career education related activities and abstracts of projects currently being administered by the career education program. The abstracts make up the largest portion of the document, 128 pages, and are arranged in the six program areas of: (1) research, planning, and policy analysis; (2) guidance, counseling, and placement; (3) curriculum; (4) financial barriers; (5) alternative settings; and (6) systemic or institutional changes. In addition, abstracts of projects awarded research grants in FY 1973 and FY 1974 are included. (Author/MW)

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Department of Health, Education, and Welfare

NATIONAL INSTITUTE OF EDUCATION

Career Education Program

Program Plan for Fiscal Year 1975

September 1974

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NATIONAL INSTITUTE OF EDUCATION

CAREER EDUCATION PROGRAM

PROGRAM PLAN FOR FY 1975

September 1974

1200 19th Street, N.W.
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INTRODUCTION

In April 1973, the National Institute of Education published the Forward Plan for Career Education Research and Development outlining the framework around which the Institute's program would be built and describing the projects initiated by the Office of Education and transferred to NIE. The present plan reviews work on these and offers a status report on major program areas.

The Forward Plan initiated a continuing round of discussions about NIE's career education efforts. Over 2,500 copies were distributed to interested persons and groups of Federal, State and local educators.* Hundreds have reacted to the plan. Several conferences, workshops, and smaller discussions have been held in the last year with the goal of improving our efforts to meet the needs of the educational community.

We are grateful to all participants in these discussions. The fiscal year 1975 plan reflects your suggestions, although it is often difficult to identify the recommendations of specific individuals or groups. We have benefitted also from the analyses of study groups and national commissions examining issues related to education and work.

The fiscal year 1975 plan was approved by the National Council on Educational Research (NIE's policy making board) in May 1974 as NIE's major program of research and development to improve our understanding of the relationship of education and work.

The plan reviews some of the questions in career education, including the problems it addresses and efforts to date, and outlines our activities in six program areas: Guidance, Counseling and Placement; Curriculum; Financial Barriers; Alternative Settings; Systemic or Institutional Changes; and Research and Policy Analyses.

As with the Forward Plan, we consider your reactions essential to the continual strengthening of our efforts. We would appreciate your suggestions on how to improve the contributions NIE is making to American education.

Corinne Rieder
Assistant Director
Career Education Program

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*Copies of the Plan are no longer available from NIE. Anyone interested in reviewing this document can obtain it in microfiche ($.65) or hard copy ($9.87) from the Education Research Information Center (ERIC). The accession number is ED 076849.

PROGRAM PLAN, EDUCATION AND WORK PRIORITY
CAREER EDUCATION PROGRAM

A. BACKGROUND

1. Principal problem(s) addressed by the program:

Most Americans believe that education and work are related. Both Gallup polls and a recent NIE-sponsored survey show that Americans place preparation for work, economic success, and better jobs above a variety of other reasons why people should go to school.

While public expectations regarding the contribution of schooling to success in life are high, there is considerable evidence that young people leaving school are not well prepared for the adult world.

Supporters of career education have noted that each year about 2.5 million youth leave school without a high school diploma, as general curriculum graduates or as college dropouts. On the basis of somewhat diverse evidence, it is believed that many of these youth (and a large proportion of the graduates) have left school without the skills required to obtain employment or to continue their education, a sense of where their career interests and competencies lie, adequate information about job availability and requirements, or much understanding of what it is like to have adult responsibilities.

Understandably, youth and their parents are concerned that educational reforms give as much attention to preparation for career development as schools traditionally have given to preparation for professional and higher education. Their concern is echoed in reports of national commissions which find that young people experience increasing difficulty in making the transition between full-time school and full-time work, between youth and adulthood. The reasons for these apparent difficulties are uncertain and may be related more to the availability and nature of employment opportunities for young people than to schooling. The Commissions, while acknowledging these factors, believe the difficulties are due in large part to the segregation of youth from meaningful adult life and the decline of the apprenticeship-into-life currently offered mostly in farm and small entrepreneur families. With the best of intentions, the Commissions conclude, youth have been excluded from the primary labor market, child-rearing and family responsibilities, and from other aspects of adult life as education has become prolonged and separate from home, community and workplace.

Concern is growing too for expectations held by those who return to adult education. About 15 million adult Americans are in school and an estimated 80 million more want to continue their education. The trend to adult education is likely to continue. First, the large youth population of the 1960's is growing older. Many of those who turned off or dropped out may seek further education as they assume life styles requiring more stable incomes. Second, the life span is increasing. As family responsibilities are completed, parents are re-entering the labor market, and workers are turning to education to improve employability within their present occupation, to train for occupations closer to their mature interests, or, as technological change dictates, to learn new trades. Third, as the cost of living increases, more adults are working to earn the second incomes needed to maintain their standard of living. These adults too want to qualify for better paying, more personally rewarding positions. It is not suprising that the most frequently given reason for returning to education is a desire for improvement in occupational status: better jobs or different jobs.

National commissions on secondary and post-secondary education are in remarkable agreement. Education increasingly is seen as a life-long opportunity, a series of doors opening in many directions, rather than a one-time experience ending when the individual first leaves school for work.

While these changes are taking place within the educational system, our society is seeing continual change within the labor market affecting the demand for educated workers and the ways in which their talents are utilized. Professional and technical opportunities are not increasing as rapidly as the supply of college graduates who traditionally have been recruited to fill these positions. More rapid growth in the service producing sector over the goods producing sector continues. Economists increasingly suggest that 4% or 5% unemployment rates may be unavoidable. Women and minority groups are slowly achieving a greater parity in opportunity, status, and pay, although their goals of equality and equity are still elusive.

These events in both education and the world of work are the background against which the research and development activities of the NIE's Career Education Program take place. The central question posed is to what extent can and does education affect an individual's ability to find, get, and hold a job and to progress in the career that he or she chooses.

2. What is career education:

Career education, as a new movement in education, has been variously defined. Many agree, however, that it is concerned with educational improvement and innovations that:

- help people make a commitment to meaningful work for the benefit of themselves and others

- help people make informed, realistic decisions about career goals and the education needed to reach them

- bring people in contact with a variety of occupational settings and roles for purposes of career exploration and the acquisition of general and specific skills

- greatly expand the options through which individuals can reach their educational goals in terms of the variety of programs available, locations where education takes place, way in which education is delivered, and times when education is offered

- improve ways to give financial aid for people who do not have adequate resources to begin or continue their occupational development

- bring academic and occupational curricula closer together and link educational providers from K through adulthood with each other, with the community, and with the workplace, creating a genuine partnership in the educational task

- may change the roles of schools to planners and managers of the educational growth of individuals, using a full range of societal resources

- improve economic production and social service through better matches between individual talents and societal needs, and increased awareness of how our economy functions and of the importance of human resources

Supporters of career education readily acknowledge that many factors influence careers. For example, when economic conditions are good, plenty of jobs are available and a person can more easily pick and choose from a number of opportunities. When economic conditions are bad, the opportunities are more limited. Education and schools can do little to improve directly the general health of the economy.

Other factors over which education may exercise little influence are labor market policies and practices such as the kinds of skills needed by employers and the criteria they apply in the selection of individuals for these jobs.

NIE is continuing to identify more precisely how much education realistically can be expected to influence career choice, entry and progression, even with improvement and change in educational practice. Until further information is available, claims should not be substituted for hopes. Nevertheless, it is fairly clear that education does have some significant contributions to make.

- Education can help an individual better identify the general and specific skills needed for career entry and progression in different occupations and educators can improve their ability to teach these skills to youth and adults.

- Education can lead to a better understanding of the skills needed by an individual to plan and manage his/her participation in the world of work and we can find better ways to teach these planning and management skills.

- Through education, an individual can come to a better understanding of what career opportunities are available now and are likely to be available tomorrow, a better understanding of her or his abilities and interests, and how best to match opportunity and preference.

- Through changes in our educational programs, we can enable more adults to continue their education throughout life for both professional and personal development.

- Through education, we can improve placement and follow-up services for better matches between a person's competencies and job opportunities.

- Education can help people understand how the economic system operates, prepare people to create as well as adapt to changes and increase the influence knowledgeable citizens can exert on public choices that affect economic conditions.

3. Differences among career education, vocational/technical education, and all education:

Attempts to define career education often have tried to distinguish it from vocational education and all of education. One of the difficulties is that career choice, entry, and progression probably are influenced by every aspect of an individual's background (race, sex, social class, etc.) and every type of educational experience both in and out of school. However, there are distinctions that can be made.

Career education includes vocational/technical education in that skill training and preparation for a specific job or occupation play a significant role for many youth and adults who have decided on an occupation such as carpenter, medical technician or engineer and want training to enter it.

Career education is more than vocational/technical education: the difference is between training for a single job or occupation and a concern for how education affects the sum total of one's life work, the development of which represents many choices throughout the individual's life time, and is influenced by many factors in addition to technical skills.

At the same time, career education as we see it it not synonymous with all education. Career education focuses on the interface between the individual and the economic sector, and is primarily concerned with education as it relates to career development. Education more broadly is concerned with the development of critical thinking, stimulation of the love of learning, transmission of diverse cultural heritages, and the full participation of individuals in their society.

4. Career Education programs at State and local levels

To what extent is career education already happening? The answer partly depends on definition, and there is little agreement on what goals, objectives and program characteristics could help decide whether an activity is a lot, somewhat or only a little like career education. Also, it is not yet clear how much a specific difference in program characteristics will make in program effects. Project titles can be misleading. Many Career Education-like programs are embedded in other activities or called something else, and some Career education programs on closer inspection seem like general educational reform or improved vocational/technical training. The few surveys to date indicate considerable interest in career education and a strong desire for continued Federal leadership and support, although there is also skepticism about whether career education is only a fad and fear that it is a subterfuge to stop the flow of minorities into colleges and professional positions or to create more docile dehumanized, and interchangeable parts for the military/industrial machine.

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[1] The Vocational Education Act of 1963 as amended in 1968 refers to training for occupations that do not require a Bachelor's degree. The discussion in this program plan is consistent with the definition of career education in H.R. 69 (Education Amendments of 1974, PL-93-3800; Title IV, Section 406) which emphasizes making education more relevant to employment and functioning in society. The CEP definition (1973 Forward Plan, p. 73) has been critized as too narrowly focused on the economic sector. While appreciative of the broader purposes of education, we believe that the distinctions made are essential for an R&D program.

A recent conference on career education drew 153 people from 43 States and territories. According to a survey conducted by the Council of Chief State School Officers, almost every State has designated a person to lead its work in career education and some are moving rapidly to incorporate many of the components described above in their educational programs.

As examples of these activities, Smoker has identified twelve States most advanced in implementing career education concepts:[2] New Jersey (with a comprehensive six-element program ranging from kindergarten through Teacher In-Service training with many apparent firsts in delivery mechanism and materials), Arizona (with statewide model legislation, 13 pilot projects, State funding and a ten-year plan), Maryland (Department of Education obligates itself through a five-year plan, spelling out resources and assistance to all school systems, with eight articulated strategies for reaching six major goals), Ohio (with a Career Continuum Plan covering all ages through seven programs each with curriculum and implementation guides), North Carolina (with strong programs at middle school and post-secondary levels), Wisconsin (with emphasis on local career education teams, a comprehensive network of vocational, technical, and adult programs, and direct cooperation in Career Education between the State and sixty local school systems), Texas (which has emphasized diffusion of career education to each of 1,147 local school districts and attempts to integrate career education into all aspects of education), Washington (which has strong legislation, State funding, a relatively strong high school program and emphasizes interdistrict cooperation), Michigan (division of the State into 49 career education planning districts, a strong law under consideration), California (moving to implement a comprehensive career education research and development effort at twelve sites and a career education program in all school systems) and Louisiana (which has developed and adopted a state plan for career education by all 66 local superintendents: emphasis during implementation is to be coordination and equalization of opportunity).

In all areas (legislation, funding, planning, curriculum development, school community cooperation and personnel development) some activity is to be found in most States and, in a few states, all components of a career education program at least for grades K through 12 are being initiated.

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[2] Smoker reviews many of the issues in career education and describes selected State and local programs in Career Education: Current Trends in School Policies and Programs, available through The National School Public Relations Association, 1801 N. Moore Street, Arlington, Va. 22209 (Stock #411-13311, $6.75).

5. Questions raised by the development of Career Education

While career education has many enthusiastic supporters, the development of career education has raised perplexing questions and there are some problems and inconsistencies.

First, while level of education completed is a predictor of lifetime income, the contribution of educational quality or of educational competencies attained is uncertain. Furthermore, level of education completed itself seems best predicted by parental socio-economic status and child IQ. These findings run counter to some of the implicit assumptions underlying career education, public expectations, and national hopes. We believe that quality of education and educational attainment _should_ affect life chances: that education should reduce the correlation between accident of birth and eventual occupational status.

Second, it is disturbing to know so little about the impact of education on measures of life success other than prestige and income: what about job satisfaction, participation as a citizen, or the more elusive qualities of self-actualization, personal integrity and self-knowledge, responsibility to others, a commitment to productive efforts on behalf of oneself and society, and the ability and willingness to examine critically one's life circumstances?

Third, many key terms in the equations relating education and work are poorly defined, and the value-laden issues in their definition are only beginning to be explored. For example, statements regarding the extent of job dissatisfaction among American workers and whether dissatisfaction is increasing or decreasing are controversial, perhaps because those reporting high levels use one criterion and those reporting little dissatisfaction use another.

Fourth, in part due to lack of commonly agreed upon terms, problem definition is uncertain: how many people really need "alternatives" or "improved career choices"? Are we about to leap on a new bandwagon without carefully examining the condition and direction of the old one, and with primarily intuitive assumptions as a guide for program development?

Fifth, unintended consequences of career education have not been adequately examined. For example, will improved knowledge of the economic system help young people think critically about the world as it is, and inspire them to create a better world, or will the effect be to destroy important beliefs, leaving little in their place?

6. NIE's role: NIE and OE.

At the Federal, State and local levels, career education programs intended to bring about the improvements discussed in Section 2 are underway. Their impact may characterize a major thrust of education for the next decade and beyond. Although the goals of career education may be shared with other educational reforms, Career Education is becoming the catalyst through which enough change to make a difference may take place.

There are two categories of activities in the area of career education which need to be undertaken by the Division of Education in the Department of Health, Education and Welfare. (See Attachment A).

1) The examination of the relationship of education and work, and the development of programs and products to improve this relationship, and

2) Assistance to States and local education agencies to use, demonstrate and improve the practice of education in relationship in the world of work.

The latter task is primarily that of the Office of Education. The former task, examining the role of education in improving work opportunities, and subsequently developing program improvements for education, is primarily that of the National Institute of Education's Career Education Program (CEP).[3]

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[3] N.I.E's authorizing legislation enacted in 1972, includes a specific reference to career education R&D; H.R. 69, passed in 1974, authorizes career education R&D to be conducted by the Office of Education. NIE's and OE's activities in career education are being re-examined in light of this legislation.

B. GOALS OF THE CAREER EDUCATION PROGRAM

1. The first goal of the National Institute of Education's Career Education Program is to improve our understanding of the relationship between education and work. This includes better definition of the problems, better measurement of the improvements (such as more informed career choices) we hope to achieve, more accurate knowledge of, to what extent educational reform can--and can not--be expected to make a difference, either in workers' lives or the work of society, and better understanding of how, when, and why education and work are, and are not, related.

2. The second major goal of the National Institute's program is to increase the contribution education makes to individuals' abilities to choose, enter and progress in work that is benefical to themselves and others.

C. WHAT IS IMPORTANT TO DO: STRATEGIES FOR REACHING INSTITUTE'S CAREER EDUCATION GOALS

The first program goal is to improve our knowledge of the relationship between education and work. Our first strategy is to investigate through research the nature of the relationship between education and work, and to reassess through policy and planning studies the strategies and activities recommended for strengthening that relationship through program development.

The second program goal is to increase the contribution education makes to individuals' abilities to choose, enter and progress in work that is of benefit to themselves and others. On the basis of preliminary review of the literature and extensive discussions with policy makers, program administrators and practitioners, five major educational barriers to career choice, entry and progression have been selected as the initial targets for program development strategies. These barriers toward which educational programs can direct their efforts are lack of information, inadequate curricula, lack of money, inadequate educational settings, and lack of coordination among components of career education programs. This goal will be pursued through our second to sixth strategies.

Our second strategy is to design, develop and test guidance, counseling and placement programs that can be utilized by practitioners to assist youth and adults in entering and progressing in careers, and to disseminate effective models to practicitioners and administrators.

Our third strategy is to design, develop, test and disseminate career education curriculum materials to be used by students and teachers in schools to provide information and experiences that will facilitate better choices and entry into chosen fields.

Our fourth strategy is to design, develop and test alternative ways of providing financial support to youth and adults for purposes of career development.

Our fifth strategy is to examine through studies and experiments the extent to which alternative educational settings serve different Career Education needs and improve the individual's ability to enter and progress in a career.

Our sixth strategy is to develop, test and disseminate systemic or institutional changes to improve the Career Education delivery system.

The six strategies were selected on the basis of work since November 1972 on barriers to career choice, entry and progression. Some other strategies were considered but rejected for the present. For example:

(1) The strategy of developing and testing ways of improving essential skills have been (and is still being) considered. The creation of the Essential Skills Program in NIE reduced the need for our emphasis on communication and computational skills, and it is not yet sufficiently clear what other studies are needed that are not already underway elsewhere to justify this area as a priority strategy for career education.

(2) The strategy of developing and testing improved ways to train and certify educational staff was considered. Creation of the NIE Educational Personnel task force reduced the need for CEP emphasis on improved teacher training. However, the importance of assuring attention to training career education personnel is abundantly clear, regardless of where such activities are located within the NIE.

The Career Education Program will continue to work with these two other groups in NIE to achieve the goals of career education through improving Essential Skills achievement and Educational Personnel development.

Studies in process may lead to changes in strategies or emphasis: for example, greater emphasis may emerge on non-market work, on motivational barriers and beliefs that impede use of present educational resources for career development, or on developing flexibility and learning-how-to-learn.

We hope that CEP activities can contribute to helping people:

- (1: policy analysis and research) make more informed decisions about allocations of educational resources insofar as career choice, access and progression are concerned;
- (2: guidance, counseling and placement projects) make better individual choices among career and educational opportunities;
- (3: curriculum) obtain the general and specific skills needed for entry and progression in occupations of their choice;
- (4: studies of financial barriers) be able to leave and re-enter occupational education programs throughout their lives;
- (5: alternative settings projects) have access to education in non-traditional settings, which may be more effective and appropriate for many people, as well as in traditional settings;
- (6: systemic) participate in an educational system that (a) is more responsive to the needs of adult learners and (b) better links primary, secondary and post-secondary schools with each other, the community, and the work place.

Table I shows the distribution of funds for the six strategies for FY 1972 through 1974 with estimates for FY 1975 and 1976.

Table I

Percent Distribution of Funds by Program Areas, FY 72 thru FY 76

	Fiscal Year				
Program Area	72	73	74	est. 75	est.** 76
1. Research*	-	12%	8%	11%	11%
2. Guidance	10	16	13	17	9
3. Curriculum	40	46	20	6	13
4. Financial	-	-	1	1	14
5. Alternative Settings	50	26	44	53	37
6. Systemic Changes	-	-	14	12	16

*Includes only studies not directly related to other program areas
**Estimated distributions depend on availability of funds.

The changes in distribution reflect several trends:

1. Several large programs have been cut back, redirected, or accelerated so that products will soon be or already are available.

   For example, in curriculum development, the Ohio State University Center for Vocational Education's grant to produce Career Education modules is now completed. The 30 revised units and staff development packages are available* for schools. The remaining 64 units will be field tested in FY 1975. Many schools and school districts have expressed an interest in purchasing these materials. Our re-direction has been (a) to regard the already produced units as samples, or exemplary modules around which local school systems can build their own materials and programs; (b) to improve quality by vigorous testing and expert reviews of content; and (c) to examine alternative program "matrices" on which local production could be based. This redirection also allows examination of a range of approaches to curriculum and program development rather than placing most resources into one project. The original planning documents for this effort and NIE's evaluation of them are available from the Center or through the ERIC system. (ED 082059, Microfiche $.65, hard copy $13.16) under the title Developmental Goals for a Comprehensive Career Education Model (with a review).

2. Some projects are ready for replication and dissemination. These projects show a fairly steady line item investment as the monies needed earlier for design and testing are re-distributed to replication and dissemination.

   EXAMPLE: The Experience Based Career Education (EBCE) programs are moving from design into prototype testing and replication planning phases (FY 1975) and then into replication and dissemination (FY 1976). Our direction has improved program quality through frequent project reviews, strengthened evaluation of costs and effects, and accelerated planning for dissemination strategies to help ensure that this promising innovation can have a wide and lasting impact on education.

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*The Units are available through the Center for Vocational Education at Ohio State University.

3. Some new projects have entered the pipeline and are in the early planning stage (FY 1975) with design/development or testing expected in FY 1976. We are also expanding policy analysis activities to address controversial issues in career education.

   EXAMPLE: In FY 1974, the National Institute began a planning study of the linkages necessary for a career education delivery system at the local or State levels, so the Institute could test ways to coordinate K through adult education related to career development. We expect the planning study, which should be complete in early 1975, will help set priorities among projects to be started in late FY 1975.

It should be emphasized that these new activities depend on availability of funds. It is expected that completion of worthy programs begun prior to FY 1975 will have priority over new starts if requested funds are not available. Activities described in this Program Plan should be regarded as intent rather than commitment.

D. SIX STRATEGIES DESCRIBED

1. Research, Planning and Policy Analysis

a. Need: Almost all reports of national commission and study groups on career education have yielded numerous suggestions for changes in policy and practice. Most recommend a combination of some immediate changes, some further study and experimentation, and some research before the suggestions are implemented.

For example, the report of the President's Scientific Advisory Committee, "Youth: Transition to Adulthood", offers seven alternative directions for change and lists six "important and worthwhile research topics." These topics include research on the costs of part-time work to academic achievement and returns from such work in terms of subsequent job availability and accumulated work experience; benefits and costs of interrupting schooling; the need to systematically review experience with national service programs such as the Peace Corps; pushing existing research on economic returns to schooling to identify returns to education by type of schooling and age level; panel studies of youth cohorts to examine effects of social policies on life histories; and development of appropriate instruments to measure the impact of social institutions on those within them, particularly non-cognitive measures of personal development and more direct measures of social well-being.

The list of policy studies, pilot experiments, and research called for on the basis of recent analyses could be expanded several times over. It seems clear that while the knowledge base permits some expansion and improvement of existing programs, and justifies the experimental and developmental work proposed in the other strategies, we must invest in both policy analysis and research if we are to move towards additional program development and policy change with reasonable confidence in the problem definition and in the likelihood of success of different educational and non-educational changes.

Our first strategy, therefore, is to investigate through research the nature of the relationship between education and work, and to examine through policy and planning studies the strategies and activities recommended for program development.

b. Objectives: The objective of the research, planning and policy analysis strategy is to meet our first program objective: to better understand the relation between education and work, so that new educational strategies can be recommended with considerable confidence in their probable effects.

Three sub-objectives have been identified:

1. To improve conceptualization of key terms such as "job satisfaction" and "non-market returns," and to help establish agreed-upon measurable outcomes for career education.

2. To better understand the interactions among family, peer, school, and community factors that influence individual choice and success in the world of work.

3. To analyze innovations suggested for educational programs to determine whether or not further development of these suggestions has a high probability of success.

c. Outcomes: A number of results are expected:

1. The Institute will have answers regarding the probable benefits of suggested program development in several areas of high interest.

2. School systems and educational planners will have the answers to several policy questions of high interest as guides to whether or not to proceed with changes in policy and practice.

3. The Institute will have research findings in several significant areas. These findings will test the validity of the assumptions on which education and work programs are based, and will contribute to the development of educational theory or predictive models in this area.

4. A number of reliable, valid measures will be available to assess the outcomes of career education programs, for use by school systems and as general social indicators of the effects of career education strategies.

d. Progress to date: Progress to date includes awarding research grants and contracts for studies in three areas. These are: (1) career decision making, including studies of the economic, psychological and sociological determinants of career choice; (2) policy studies on the extent of which education can reduce job dissatisfaction and the problems of under-employment and (3) measurement of non-cognitive educational outcomes related to work.

e. Future Directions: Activities will include continuation of the research program, expansion of planning and policy studies, and expansion of studies related to specification of outcomes and measurement. Decisions on which research, planning, policy and measurement studies will have highest priority will be made in FY 1975, following in-house analysis and meetings with practitioners and researchers. We expect to map out a three to five year program within which the questions most likely to influence program development are placed in priority order, and plans for reporting the findings are matched as closely as possible with program decisions under consideration at Federal, State and local levels.

As examples of the research (R) and policy analysis (PA) issues being considered as high priority are:

1. (R) Is "flexibility," "adaptiveness," "ability to cope" a reasonably independent ability or skill, or is it essentially a new label for general intelligence? What educational experiences, if any, are most likely to develop this skill or ability or, like general intellectual ability, does it seem difficult to influence through educational experiences? Does the improvement in "flexibility" or "learning how to learn" developed through systematic educational experiences have transfer value, or function like, these same qualities when they are developed outside school? Does this skill or ability predict life history and occupational success to the extent people now believe it may? Or is it relatively marginal, compared with other personal characteristics?

2. (R) What general and specific skills are needed for entry into different occupations? Can we identify a core of skills which have considerable transfer value? What is the difference in terms of general and specific skills between one occupation and another, or between jobs within similar occupations? What contribution can education make to job analysis? How can

education best contribute to development of needed skills, to shortening the time required for transfers or achievement of minimum level of competencies? What is the proper mix of general and specific skills for different occupations?

3. (PA) Some people recommend reducing age of compulsory education to 14, with the development of alternative programs for youth; others say the money would be better spent in improving the schools as they are. On the basis of present knowledge, what would be the probable costs and consequences of these changes, and of the alternative strategies suggested?

4. (PA) According to some, much youth unemployment arises because youth voluntarily enter and leave jobs, i.e., job mobility among youth rather than lack of jobs for which youth are qualified creates unemployment. Are high youth unemployment rates really a problem? From the perspective of the individual, is this perhaps as good a way to explore different jobs and become familiar with the world of work as another, more formal educational approach we could devise? From the employers' perspective, are there alternatives that cost less or contribute more to productivity?

2. Guidance, Counseling and Placement

a. Need: Willard Wirtz, former Secretary of Labor, has testified recently that, "The most serious identifiable element in the present breakdown at the school-to-work gap is the failure to develop an adequate guidance and counseling system." Kenneth Hoyt of the Career Education Office of the U.S. Office of Education considers "the creation of a comprehensive career guidance, counseling, placement, and follow-up programs that serve both in-school and out-of-school youth and adults" among the major changes demanded for successful implementation of career education. According to estimates from national surveys, about 90% of all youth and about 13% of all adults would be affected by such programs.

Our second strategy is, therefore, to design, develop and test guidance, counseling and placement programs that can be utilized by practitioners to assist youth and adults in entering and progressing in careers, and to disseminate effective models to practitioners and administrators in cooperation with the Office of Education and the Department of Labor.

b. Long-term Objectives: We are trying to find out what information about the labor market, careers, and educational opportunities people need, how much assistance they need, when they need help, and the best way to provide the guidance, counseling, placement and follow-up programs called for by Hoyt and others.

As sub-objectives, we are working to determine how early children should begin to learn about careers and adult roles; what information pre-adolescents require; how to decrease sex and ethnic stereotyping in career choices of women and minorities; how to help in- and out-of school youth make career choices, locate jobs or enter further educational opportunities; how to help adults considering mid-career changes catch up with education and careers in the 70's; and the potential of career counseling to help older workers effectively utilize re-training opportunities.

In all the projects, we are testing cost, utility and impact, as well as the acceptability and consequences of various modes of delivery.

c. Long-term Outcomes and Consequences: Expected outcomes of Institute activities in this area include:

- a wide variety of high quality, timely, inexpensive and well-tested career guidance materials

- materials reflecting the needs of population sub-groups in terms of age, sex, ethnicity, and type of assistance sought. (Most materials are now suited for college bound youth).

- a variety of validated tests and inventories for client self-assessment, comparing personal traits with the characteristics of successful workers in many occupations.

- up-to-date training materials and procedures for career guidance and counseling personnel. Since paraprofessionals may be needed to meet the apparent need at a reasonable cost, training materials are particularly important. There are, at present, few if any materials for training paraprofessionals in career guidance.

- tested procedures and models for service delivery from which planners and service providers can choose, knowing the organizational and personnel requirements, costs, and probable effectiveness of different models.

d. Progress to Date: Work to date includes satisfactory progress in the development of materials for two sub-groups (senior high school students and home-based adults) which appear to be effective in the short-run; consensus that we are asking important questions; preliminary indicators of potential widespread adoption and endorsement of Institute-sponsored materials and guidelines.

As examples,

- The products of the career decision-making program developed at the Appalachian Educational Laboratory will be ready to disseminate in winter 1975. The Career Information System materials translate Department of Labor handbooks and other information into language readily understood by high school students, and help match the student's interests with occupational and educational possibilities. The materials are inexpensive and easy-to-use. The Laboratory is also developing a one semester career exploration course for high schools. Preliminary data show considerable success in module-by-module learning; in FY 1975, the impact of the whole program on career decisions will be tested. Inquiries from all over the country asking to help test the materials suggest the system may be useful for diverse groups such as the handicapped, adults with high school level reading skills, young offenders, community college students, and students in a statewide open education program.

- The Career Counseling Service, a unique telephone counseling service which has already served 2000 adults not employed full time or currently going to school, will be prototype tested in FY 1975. A series of "How to" manuals will be prepared and field tested in other sites. There is much interest in adult career counseling, and experts have endorsed the value of these counselor training materials, the telephone counseling procedures, and the overall approach. Preliminary data suggest that clients are satisfied with the service and take action based on their decisions, particularly in re-entering education.

- The Career Planning and Support System being developed by the Center for Vocational Education at Ohio State University is designed to enable high school guidance programs to more closely match resources and services. The program will allow schools to more systematically upgrade and evaluate career guidance programs based on their own assessment of student needs and community resources. It is currently being tested in more than 50 school districts across the country to assure its applicability to varying populations. A final system should be available by early 1977.

e. Future Decisions: Projects to date have been creating improved and new materials and examining delivery systems. Prior to initiating new development, a problem analysis of what information about the labor market, careers, and educational opportunities different people need at different times in their lives seems necessary.

In FY 1975, activities will include (a) commissioned papers bringing together available information to define the nature and extent of the need, and (b) a national survey of career counseling programs to learn what approaches seem to work best, for whom, and under what circumstances. Matching assessed needs with available programs will help us know where an R&D investment is most likely to yield better materials, measures, and delivery systems for different sub-groups.

Among the research projects to increase basic knowledge is an analysis of theories of career decision-making (economic, psychological and sociological) and of the common findings from several major cross-sectional and longitudinal studies, including the 11 year study of high school seniors (Project Talent), the 8 year study of 2200 male high school seniors (Bachman, "Youth: in Transition") and the 8 year study of 2790 high school freshmen (Rehberg). This project will bring together for the first time three quite different approaches to understanding career decision making and, together with the survey described above, will form the basis for future work in this area.

One particularly interesting project to be completed in FY 1975 is the development, testing and dissemination of a kit to train counselors how to recognize sex biases in career interest inventories, and how to provide sex fair counseling when the inventory results are interpreted. This project is based on an FY 1974 NIE-sponsored study of the question of sex fairness and sex bias in career interest tests.

Finally, evaluations of already funded programs and reviews of the literature will examine the benefits/costs of career counseling, guidance and placement. While most experts have endorsed the importance of these services, others have pointed to lack of information about the impact of career information on decisions and eventual life circumstances and urged us to maintain a skeptical attitude in testing promising approaches.

In summary, we are bringing together the knowledge base, preparing career exploration materials for high school students, testing an innovative delivery system for adult career guidance, and initiating a national survey of this rapidly expanding area.

Later activities to reach the long-term objectives are:

- dissemination of new career guidance materials and procedures which have been developed with NIE support. These include (a) the procedural and training materials for a unique center delivering career guidance by telephone to home-based adults and (b) a career information system, plus a career development curriculum, prepared for senior high school students.

- developing and testing new ways to provide access to guidance and counseling, new ways to improve ability of present counselors to assist in career development, and new materials that are appropriate for population subgroups such as older workers facing re-training, women about to re-enter the labor market, and ethnic minorities. Future work is likely to include (a) counselor training programs, (b) studies of the governance and finance of career counseling for adults and youth at the local level, and (c) research to learn how people make career decisions throughout their lives.

3. Curriculum

a. Need: Curricula in primary and secondary schools were developed to teach all students basic skills, to prepare some students for college-level courses, to offer students who were not continuing their education, general information in areas such as English, mathematics and civics and to prepare some students for entry level jobs in business and technical occupations. Information about careers, how the economic system operates, or opportunities to apply academic skills to the kind of practical problems adults have to solve have been provided unsystematically, if at all.

Schools are diversifying their curricula and decreasing the distances among academic, general and vocational tracks. Infusion of a new curriculum element or further curriculum reorganization are viewed with concern by some educators, who believe a re-emphasis on academic fundamentals and a general upgrading of standards of academic excellence should have first priority. Other educators believe, however, that major curriculum reform is essential to provide America's youth with the information, experiences and skills to equip them to function in the adult world.

Our third strategy is to design, develop, test and disseminate career education curriculum materials to be used by students and teachers to provide information and experiences that will facilitate better choices and entry into chosen fields.

b. Long-term Objectives: The five major objectives of these activities are:

1. to integrate academic information with information about careers and the world of work

2. to increase children's motivation and interest in academic subjects by emphasizing the relationship between school subjects and the world of work

3. to better prepare teachers for career education

4. to help children integrate knowledge about their personal interests, aptitudes, and abilities with knowledge about the world of work

5. to support local innovations which meet the first four objectives

Sub-objectives in this strategy include specifying outcomes unique to career education by age, gender, ethnic group, and social class; developing a variety of ways in which teachers can reach the learner objectives; and examining the compatability of traditional academic goals and career education curricula. In addition, some States such as Texas are developing statewide specifications of what a high school graduate should know about careers. Others such as Oregon are requiring an employable skill or life experience as graduation requirements. We need to examine the outcomes of these strategies.

c. Long-term Outcomes: As a result of Institute activities:

1. A wide variety of high quality, inexpensive and effective materials will be available for use in implementing career education programs. These materials will be sufficiently diverse so that schools concerned with the career education of minorities and women can find curriculum materials tailored to the needs of these subgroups.

2. Tested materials and procedures for in-service and pre-service teacher training will be available.

3. A variety of procedures and models will be available to better organize both in-school and out-of-school activities in order to reach career education objectives.

4. a variety of tested objectives and measures of achievement will be available to use in developing programs and assessing the effectiveness of educational changes for improving career awareness and preparation, and knowledge of the world of work in school-age children.

d. Progress to Date: Progress to date has included improved information about what is currently available through CEP funded preparation of resource guides and handbooks; some increase in the availability of curriculum and teacher training materials; and endorsement of the approaches we are taking in the curriculum area.

The CEP has been criticized for "holding back" on curriculum materials; at the same time, practitioners have asked for tested materials whose value is reasonably well known and which have been revised on the basis of field experience. We are moving as quickly as possible to complete testing, revision and to disseminate these materials widely and inexpensively; we are also presenting to educators the minimum time-lines and marketing considerations that account for the apparent delays.

e. Future Directions: Three projects will be completed with FY 1975 funding:

- The final group of career education K through 12 curriculum units developed by the Ohio State University Center for Vocational Education will be field tested, revised, and ready for distribution with no further funds necessary in FY 1976. About 3000 children will be involved in the field test. Expert reviews endorsed the content value of these units; FY 1974 field tests indicated that about 90% of the first 45 units yielded statistically reliable gains over control classes.

- The curricula and teacher training materials developed at Ohio State University and at North Carolina to improve vocational technical education will have been field tested and revised, and the products of these activities brought to completion with FY 1975 funding.

- The study of how planning and implementation for career education is undertaken in the schools of six communities (the six that participated in developing the Ohio State University materials) will be completed with 1975 funds. The findings will be useful in providing planning guidelines for school systems, in alerting school officials to barriers in implementation, and showing how these may be overcome.

- The Occupational Exploration Curriculum is designed for in-school use at the junior high school and middle school level. Through simulation modules, youth will have an opportunity to explore, experience and learn from the world of work. Experts have endorsed program content but pilot test results will not be available until late 1974. There are few tested materials available now for occupational guidance for 7th and 8th graders, and yet this is an age when students are especially ready and eager to learn about themselves and the future. In FY 1975, of the 12 simulation modules will be field tested and staff development materials will be prepared. The project will be completed in FY 1976.

Later support for three activities is needed:

- field testing and dissemination of an occupational exploration curriculum for junior high school students, completing work begun in FY 1973

- design and development of programs aimed at reducing sex stereotyping in occupational and educational aspirations, with particular emphasis on young children, and on the support parents and teachers can give to children with non-traditional aspirations or who wish to explore non-traditional occupations.

- a school grants program, to identify and evaluate locally initiated curriculum innovations which give promise of reaching career education objectives considered theoretically important for primary and secondary students.

It should be noted that one issue in this area is coordination with the Office of Education which has funded the development of K through 12 career education curricula and programs. High on our priority list in FY 1975 is working together with the Office of Education to review these programs and identify both promising approaches on which we can build and gaps in curriculum development.

4. Financial Barriers

a. Need: Support for this strategy comes from many sources, including the President's Science Advisory Committee report, "Youth: Transition to Adulthood," from national surveys reporting that the obstacles to continuing education most frequently mentioned by adults were lack of time, money, and support for child care, and from the European studies of worker sabbaticals and other means of supporting adult education discussed in the NIE-sponsored book, "Recurrent Education." In addition, the great increase of young adults who have re-entered education in the past five years probably predicts a still greater interest in continuing career development during this decade. The country will need a policy on educational support for these adults, and a guide to more flexible financing of education of youths.

Strategy four is to design, develop and test alternative ways of providing financial support to youth and adults for purposes of career development.

b. Long-term Objectives: We are striving in this area to learn how much money, in what form, is needed to make "life-long education for occupational development" a reality. Among the alternatives suggested are vouchers or entitlements for youth, and paid educational leave for adults. Almost everyone agrees that expansion of educational opportunities is needed; however, there is considerable uncertainty about what financial support is necessary, how much, and what realistically can be recommended. A recent survey of State Career Education Directors showed, for example, that most did not want a voucher or individual entitlement approach pursued. Our purpose in this area is to examine these issues thoroughly and, if justified, to initiate experimental tests of new approaches to financial support for youth and adults.

c. Long-term Outcomes: Among the outcomes of Institute activities in this area will be:

1. Knowledge of the extent and severity of problems relating to financial barriers to adult education for the purposes of occupational development

2. Tested models of educational support for youth and adults so decision makers and program administrators will be able to choose among them with some certainty about the feasibility, probable impact, and organizational/legal requirements of alternative forms of enablement

3. Knowledge about the value or feasibility of some alternative forms of financial enablement that has attracted considerable interest and debate but which has not to date been rigorously examined or tested.

d. Progress to Date: Analysis of the issues has been furthered through Institute support for a book on recurrent education and through several studies examining European approaches to the finance and governance of adult education.

The importance of the question of alternative funding mechanisms for youth and increased financial support for adults has been confirmed by a number of commission reports and experts in the area. A small workshop in fall 1975 will analyze the implications of the experience in France, the United Kingdom and Germany in light of conditions in the United States.

e. Future Directions: In FY 1975, we will initiate a design study of entitlements for youth. This idea, which has been recommended by several national commissions, would vest educational choices and financial support in individuals, as well as in institutions, in much the way the GI Bill of Rights opened educational doors to returning veterans after World War II. The design study would examine such questions as the optimum and feasible amounts of entitlements, what types of educational training would be supported, how long the entitlements would be in effect, the conditions of use, and the costs and probable benefits of this approach as a means of supporting specific skill training and expanding the range of post-secondary opportunities.

A study of financial support for adults who seek additional education as a means of improving their occupational status is a high priority. As mentioned above, at present, scholarship and loan support for post-secondary education is weighted in favor of full-time students: also, single, younger students benefit more from partially subsidized student housing, assistantships, and student job openings. A recent U.S. Office of Education survey concluded that most adults now pay out of their own pockets the costs of their continuing education. Some can afford to do so; many, apparently, cannot. The wages that would be foregone in order to return to school on a full-time basis makes education prohibitively expensive for many adults while taking a single course per semester may mean years before a degree is earned. Although the best way to enable adults to continue their education is a controversial subject, the need for a study examining the issues and the alternatives seems clear. As mentioned above, the Institute has funded some preparatory studies on the European experiences with paid educational leave and on other issues related to recurrent education. We will build on these studies in the FY 1975 design and policy analysis papers.

Assuming the FY 1975 design papers indicate the feasibility and probable benefits of alternative financing, the Institute would seek interagency support from the Office of Education, the Department of Labor, and external groups for experimental tests of youth entitlements, and of different approaches to financial aid for full-time and part-time adult learners.

Two activities are proposed for later years:

- development and testing arrangements whereby youth can leave formal education, and within a certain period of time, re-enter to continue their schooling, using the financial entitlement set aside for this purpose. Use of the entitlement might be conditional on a period of public service or in other ways be adapted to meet the needs of both the individual for flexible financial enablement, and of society for the service and participation of youth.

- development and testing of financial support for adults. Two forms are currently being considered: support for full-time study for workers, and grants-in-aid to pay for child care, books, transportation and other educational expenses of people who want to continue their education in order to re-enter the labor market.

5. Alternative Settings

a. Need: The theme of educational alternatives to formal schooling is sounded in almost every recent analysis of secondary and post-secondary education. The National Commission on the Reform of Secondary Education writes, "The National Commission does not advocate abandonment of the traditional high school. It does urge, however, that recognition be given to a wide variety of alternatives...A wide variety of paths leading to completion of requirements for graduation from high school should be made available to all students. Individual students must be encouraged to assume major responsibility for the determination of their educational goals, the development of the learning activities needed to achieve these goals, and the appraisal of their progress." The recommendations of the various Commissions differ primarily in their emphasis on incorporating nonacademic alternatives within the school as well as creating alternative paths lying mostly outside the school versus the conclusion reached in "Youth: Transition to Adulthood": "Examining both sides, we feel that the benefits of incorporating noncognitive activities into schools are far fewer than those from organizing them outside schools. The principal benefit of the former path appears to be organizational; 'neatness' and insurance that all youth will be 'covered' by such activity. But the costs are the distortion of such activity to fit the organizational characteristics of a school, a distortion that strikes at the very heart of the activity."

The assumption on which recommendations for alternative paths rest is that while schools are places where many children and adults are happy, enthusiastic and learn well, for many others alternative settings may be far more effective.

"Youth: Transition to Adulthood" distinguishes between the self-centered objectives, traditionally the concern of formal schooling and a second class of objectives "involving responsibilities affecting others." Included in the first class are "the cognitive and noncognitive skills necessary for economic independence and for occupational opportunities, capability as a consumer, not only of goods but also the cultural riches of civilization and capabilities for engaging in intense, concentrated involvement in an activity." Among the second class are "experience with persons differing from oneself in social class, subculture and age; the experience of having others dependent on one's action, and interdependent activities directed toward collective goals, and, the development of a sense of identity and self-esteem."

The fifth strategy therefore aims to expand alternatives for youth and adults, by examining through studies and experiments the extent to which alternative educational settings can serve different career education needs and improve individuals' opportunities to enter and progress in careers. Alternative educational settings may bring work experiences into school, take school programs to work sites, or integrate the two kinds of programs and settings. This strategy also brings together educational activities addressed specifically in other strategies, such as guidance and curriculum. Youth or adults may be served; public or private institutions may be involved.

The rationale for studying alternative educational settings includes research findings that people often differ in their learning styles and ability to achieve in specific settings, as well as recommendations from recent national surveys and commissions. These reports, which include the 1970 White

House Conference on Youth, urge that alternative settings and opportunities be provided for youth to merge continued academic and intellectual development, service to the community, and responsible participation in the economic and social life of adults.

While many alternatives have been developed in the past, such as work-study programs, proprietary skills training programs, residential manpower training programs, and schools using the community as the classroom, the high risk and start-up costs in designing and testing alternative settings have led many practitioners to turn to the Institute for support and leadership in this area.

b. Long-term Objectives: The objectives of this strategy are:

1. to define better the need for alternative settings, establishing more clearly the extent and severity of the need and the value of the many suggestions offered for outcomes of concern to career education

2. to identify and develop promising alternatives

3. to test these alternatives in comparison with existing programs

4. to test the replication and dissemination of effective alternative settings.

c. Long-term Outcomes: As a result of Institute activity in this area,

1. Information will become available about the organizational requirements, staff, costs, and effectiveness of an experience based career education program similar in objectives and strategy alternatives recommended by the National Commission on Reform of Post-secondary Education.

2. Information about the organizational requirements, staffing costs, and effectiveness of a residential program for the educational rehabilitation of multi-problem families, in comparison with the benefits/costs of welfare, manpower training programs and non-residential alternatives will be available for policy makers and program administrators.

3. A variety of tested models of alternative settings will be available; the requirements, cost and effectiveness of bringing the workplace closer to the school, will be compared with alternatives expanding the learning opportunities in the public service and industry.

d. Progress to date: Progress to date includes endorsement from experts of the importance of Institute design and development work in this strategy; and encouraging results from two projects already underway. These projects are the Experience Based Career Education (EBCE) program, and the Mountain Plains (MP) program.

e. Future Directions: In FY 1975, a prototype test of the EBCE program will be conducted to provide data on processes and outcomes; planning will be continued for replicating and disseminating this apparently successful approach. We are also optimistic about what we will learn from the Mountain Plains program, which will enter the fourth year of a five-year Institute commitment to the project. The MP's program has reduced costs and strengthened the educational guidance and placement components. Benefits to participants continue to be encouraging.

In FY 1975, high priority will be placed on initiating design studies of alternative programs for youth. The ideas from these studies come from many sources: workshops, national commissions, and recent evaluations of work-experience programs. Three design studies are proposed:

- the establishment of youth councils, at local, regional, or national levels, to represent the interests of youth in manpower planning, Career education, and vocational education activities; and to serve the needs of both in-school and out-of-school youth. A less tangible outcome of the youth council idea may be, as Willard Wirtz testified, "New promise that the hardest question of all--how to reinvigorate community participation in the education and education-work programs--will now be the subject of the serious and concentrated attention it demands."

- Bringing the school closer to the workplace by increasing employment opportunities for youth through such mechanisms as insurance and incentive programs minimizing risks to employers, scheduled job rotation, and the formation of both profit and non-profit organizations and service agencies to provide youth with responsible, interesting work on a relatively large scale.

- Bringing the workplace to the school through establishment of productive high schools and community colleges. As an integral part of their organization, these schools would incorporate business and social service operations providing students with highly varied opportunities for meaningful and responsible work experience to reach both career exploration and occupational training goals.

Later support will be needed for three activities:

- Field testing, dissemination, and related studies of the Experience Based Career Education program will be initiated in FY 1976, continuing the planned development of this concept begun in FY 1972. The emphasis will be on utilization of proven approaches to experience based career education, examining the range of effectiveness of the program, variations, and components.

- Development and testing of a package of New Alternatives for Youth based on FY 1975 design studies. Programs currently under consideration are youth councils, productive high schools and projects to increase the number of educationally productive jobs for youth.

- Testing the effectiveness of the Mountain Plain's program and preparing the final NIE report on this approach to residential education for multi-problem, rural families.

6. Systemic or Institutional Changes

Reviews of career education programs and discussions with program planners have indicated a need to learn, through demonstration programs and research projects, how to coordinate educational programs for career development from K through adulthood. The exact nature of the intervention will be determined by surveys and conferences held in FY 1975. Among the alternatives being considered are expansion of competency-based credentialing systems from high school through adult work life; ways in which regional or local consortia of high schools, urban colleges, community colleges and employers could share curricula, libraries, and such support services as guidance and counseling systems; and ways to increase tranferability of educational credits across institutions and across formal and non-formal learning settings. Particular emphasis will be given to improving coordination in a locality, so a critical mass of innovative services can be provided. Such communities could demonstrate how to coordinate education for career development in large, middle-size, and rural communities, and in resource-rich and resource-spare areas.

Our sixth strategy is to develop, test and disseminate systemic or institutional changes to improve the career education delivery system.

b. Long-term Objectives: There are three objectives for the strategy of systemic or institutional change:

1. to provide better linkages between levels of education so that career education is not an isolated course or service but rather is a comprehensive and integrated experience.

2. to provide better linkages between education and the world of work to create the effective partnership among schools, labor, industry and business which is believed essential to the success of career education.

3. to enhance the flexibility of educational institutions so that the opportunities to acquire career education are more widely and equitably available.

Underlying all of these objectives is the recognition that comprehensive change, not isolated change, in the educational system is necessary; and that bringing together the most promising procedures, products and ideas in a single site may have the greatest likelihood of creating a model for the basic, fundamental changes some envision.

c. Long-term Outcomes: Some outcomes of the Institute's activity in this area are:

1. There will be a variety of tested models which show how to bring together enough innovation in a single site (be it a community, State or region) to have a substantial effort on career education outcomes.

2. A variety of tested products and processes will be ready to help link and coordinate different levels of education, or link and coordinate education, community, labor, industry and business sectors.

3. Information about how to achieve, and the consequences of, a variety of changes in policies and practices such as those determining where courses are given, when courses are given, who may enroll, and how learning attainment is certified will be available.

4. There will be a number of models describing what a career education system could attain, the components required, and estimates of probable costs and consequences.

d. Progress to Date: This strategy is in an earlier developmental stage than others. Progress to date includes (1) initiation of several small studies of institutional changes such as a survey of legal barriers to experience based career education and how programs have managed to operate within them, and a research study of adult external degree programs; (2) endorsement of the importance of this strategy and that it does not duplicate existing approaches by experts in career education and various professional and advisory bodies; and (3) initiation of a study to examine current approaches to career education delivery. This study will test the assumption that while many components of a career education system may be available, there is a substantial need for linking and coordinating mechanisms.

e. Future Directions: In FY 1975, greatest attention will be given to the study mentioned above. We expect that the next steps will be to create some overall designs for career education systems, find out what components are needed, design these components, and, when a certain number are available, try to integrate them in a few sites.

Insofar as possible, we would build on existing components and bring together experimental sites for new projects such as the youth councils; "design" therefore means locating promising sites and adding new components rather than starting from ground zero. In this effort, an NIE partnership with State and local education agencies, other Federal agencies, and with national and local organizations representing education, labor, business, industry and the community will be essential. We are working to provide enough resources to ensure that this person-to-person coordination can occur.

In addition, we will commission policy analyses and reviews of existing projects to identify what changes in policies and practice might best enhance institutional responsiveness.

Two activities are planned for subsequent years:

- Demonstration studies and projects to increase linkages and coordination among educational services providers such as career education personnel in secondary and post-secondary institutions, and linkages across States and regions.

- Demonstration studies, projects and experimental tests of ways to improve both access to and the content of educational programs for adults, particularly instituional changes such as a computer-based system through which all educational offerings in a community could be readily located, or studies of the use of computer terminal and video remotes in industry and homes to provide more convenient access to educational offerings.

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ATTACHMENT A
May 10, 1974

Career Education in the Division of Education, DHEW

The National Institute of Education
The U.S. Office of Education

The Division of Education, DHEW, has the single goal for career education of improving education's ability to assist individuals in preparing for and progressing in the various roles they must play in the world, especially participation in the world of work. Career education will help people throughout life to (1) become better aware of their own interests and competencies as these develop and change, (2) examine the career opportunities available in the world of work and elsewhere, and (3) find and use the means necessary to match their abilities with career opportunities.

Vocational/technical education is an essential component of career education. However, the scope of career education is broader than that of vocational education in that it (1) considers preparation for the world of work to include more than just specific skills acquisition for a job and (2) helps individuals explore, prepare for and perform in all occupations and work related roles. (It should be noted that the Vocational Education Act restricts the interpretation of vocational/technical training to occupations that require less than a Bachelors level degree).

Efforts to achieve the objectives of career education have raised issues, questions, and problems not all of which will yield to quick solutions. Certain steps can be taken immediately with confidence that the outcomes will be beneficial. Other proposed steps will require more careful analysis, development, and testing.

Under current organizational and legislative frameworks, both the National Institute of Education and the U.S. Office of Education have offices working cooperatively to support activities in career education.

National Institute of Education

NIE's mission in career education is to increase our understanding of the relationship between education and work and to improve career education through research and program development. NIE's efforts will examine many educational improvements and innovations that

- help people make informed decisions about occupations and the kind of education that will help them reach their career goals;

- provide occupationally relevant curricula and other educational experiences that bring people in contact with a wide variety of occupational settings and roles for purposes of career exploration;

- make education widely available, in schools and universities and in less traditional settings. Education would be more readily accessible, with times and with schedules suited for adults as well as children, and using modes of delivery, such as through tape cassettes, television, tutors, and on-the-job learning;

- provide people who do not have adequate resources or financial support with the aid they need to continue their occupational preparation;

- brings academic and occupation curricula closer together, and links educational providers from K through adulthood more closely with each other, and with the workplace.

NIE conducts three basic activities.

1. Research. NIE supports research concerning the relationship of education and work. These include studies of the changing economic and non-economic returns to individuals and society from the investment in education, and policy analyses examining assumptions about the match between educational experience and world of work experience. These studies will assist students, parents, teachers, school boards, administrators an legislators in making the many decisions they face regarding the improvement of educational practice.

2. Program Development. Based on the findings of research and policy analyses, NIE supports design and development projects, from the pre-K to adult levels, to evaluate a range of suggested improvements. While ultimately intended for implementation within state and local educational settings, these developmental activities characteristically are too high risk or too expensive for states and localities to undertake. The outcomes generally will be programs and ideas which have proven themselves successful, but will from time to time include the finding that proposed solutions or improvements do not improve education.

3. Dissemination. NIE has the mandate to improve educational practice by learning how best to assist states and localities in applying the results of R&D activities. NIE is developing a variety of ways to provide information on products from NIE's successful R&D

and on a limited scale, is providing appropriate technical assistance to help school districts, colleges and other institutions utilize career education products.

U.S. Office of Education

USOE's career education mission is to provide assistance to SEAs, LEAs, and to post secondary and adult education agencies in understanding career education concepts and in converting such concepts into effective and comprehensive career education programs. Basic types of activities include:

1. Conceptualization of Career Education. USOE engages in supporting activities designed to accommodate diversity and attain consensus in defining and describing career education -- its nature, promise, and problems on a continuing basis. In so doing, USOE seeks to encourage dialogue concerning emerging and changing preceptions of career education, past research findings and current NIE research bearing on the substantive content of career education, and career education practices. In addition, USOE supports analysis and studies leading to policy and implementation decisions for USOE career education efforts.

2. Technical Assistance in Career Education. USOE provides, both directly and through grants and contracts, technical assistance to SEAs, LEAs, to post secondary education and adult education agencies required for converting career education concepts into action programs. Such assistance includes establishing communication linkages, providing "seed" monies required for initial planning and implementation of career education, providing assistance for evaluation of career education, supplying answers to questions raised by career education practitioners, and providing assistance for curriculum modifications and materials adaptation.

3. Demonstration. Based on results of NIE program development, state and local initiatives and other sources, USOE supports demonstration and exemplary programs designed to build expertise in expanding the career education concept to a wide variety of kinds and levels of educational settings. In addition, demonstrations of career education practices designed to meet special needs of persons such as females, minorities, the handicapped, and the gifted and talented are supported by USOE.

4. Implementation of Career Education. USOE assists local and state agencies and post-secondary agencies through grants and contracts in the implementation of comprehensive career education programs, including personnel development and site implementation costs.

ATTACHMENT B

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACTS

The attachment contains abstracts of projects currently being administered by the Career Education Program. They are arranged in the six program areas of (1) Research, Planning and Policy Analysis, (2) Guidance Counseling and Placement, (3) Curriculum, (4) Financial Barriers, (5) Alternative Settings, and (6) Systemic or Institutional Changes. In addition, abstracts of the research grants awarded in Fiscal Years 1973 and 1974 are included.

For the sake of consistency, only the dollar amounts of funding in Fiscal Year 1974 are included. In many cases, especially the development projects, NIE expects to award funds in subsequent fiscal years depending on successful performance under terms of the contract and availability of funds.

For additional information, contact the contractor or NIE Project Officer.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
ABSTRACTS OF PROJECTS

IN PROGRAM AREA:

RESEARCH, PLANNING AND POLICY ANALYSIS

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Research, Planning and Policy Analysis

Title: Making a Choice: Understanding Career Decision Making

Contractor: Anita Mitchell
American Institutes for Research
P.O. Box 1113
Palo Alto, California 94302

Contract No.:	NIE Project Officer:
NIE-C-74-0134	Ivan Charner
Current Funding:	**Duration of Current Award:**
Fiscal Year 1974 $136,700	6/30/74 - 6/30/75

Summary:

The Career Education Program is concerned with the ability of individuals to utilize fully their skills, interests, and values in making career decisions. By increasing the understanding of career decision-making and translating this increased understanding into action programs CEP hopes to improve the career access, progression, and satisfaction of individuals. This study is the initial effort in this area and is aimed at increasing the understanding of career decision-making and identifying the need for programs and materials to improve career decision-making. It consists of four phases:

(1) A review, synthesis, and integration of the economic, psychological and sociological literature on career decision-making.

(2) A series of four workshops with researchers, practitioners and developers of both sexes who represent different racial and ethnic backgrounds to discuss their ideas and concerns about career decision-making and the range of programs, materials and information necessary to meet their needs.

(3) A conference of experts to discuss a series of papers on specific research, policy, and program topics identified during the review, synthesis, and workshop phases of the study.

(4) Compilation of a data bank on career decision-making to be housed at NIE and available to the general public for secondary analyses, comparative analyses, reanalyses, and analyses of population sub-groups.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Research, Planning and Policy Analysis

Title: A Policy Study in Education and Work: Job Satisfaction

Contractor: Robert P. Quinn
Institute for Social Research
The University of Michigan
Ann Arbor, Michigan 48106

Contract No.:	NIE Project Officer:
NIE-C-74-0136	Robert Stump
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $35,462.	6/30/74 - 1/31/75

Summary:

Research about job satisfaction has developed mainly within the fields of industrial psychology and personnel management. However, the issue that concerns NIE has not generally been addressed: What is the role of education in contributing to job satisfaction? Will educational opportunities and experiences help raise levels of job satisfaction and under what circumstances?

The contractor will review available research studies and data bases to support policy and program recommendations for NIE. At least three separate questions will be addressed: (1) What description of the "satisfied" worker is implied by the surveys and studies of job satisfaction, (2) what measures of education are used in relating education to job satisfaction and (3) what are the ways in which education interacts with other factors that have a stronger influence on levels of job satisfaction. In these instances where data is not sufficient to support recommendations, the contractor will outline what information is needed and suggest ways of gathering it.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Research, Planning and Policy Analysis

Title: A Policy Study in Education and Work: Underemployment

Contractor: Gerald P. Glyde
Institute for Research on Human Resources
The Pennsylvania State University
University Park, Pa. 16802

Contract No.:	NIE Project Officer:
NIE-C-74-0137	Robert Stump
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $32,521.	6/30/74 - 1/31/75

Summary:

The study focuses on those who are underemployed - i.e. whose skills are being underutilized in a job. The Bureau of Labor Statistics has recently estimated that in the 1980-85 period 700,000 college graduates will be looking for jobs that by today's standards require a college degree and will not be able to find them.

NIE wants to develop a more precise definition of underemployment; how patterns of underemployment influence the availability of persons to fill jobs and the implications of this situation for education decision making by individuals and institutions.

The contractor will focus on three main areas: (1) measures of critical variables to describe underemployed persons and the extensiveness of the phenomenon in today's society, (2) patterns of underemployment and how they differ for persons with various levels of educational attainment and (3) reactions to underemployment by individuals and employers. Available research studies and data bases will be reviewed and policy and program recommendations developed. In those instances where data is not sufficient to support recommendations, the contractor will indicate what information is needed and suggest ways of gathering it.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Research, Planning and Policy Analysis

Title: Study of Education Leave Programs in Western Europe

Contractor: Dr. Jarl Bengtsson
Center for Educational Research and Innovation
2 rue Adre-Pascal
75775 Paris CEDEX 16 FRANCE

Contract No.:	NIE Project Officer:
NIE-C-74-0106	Robert Stump
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $32,000.	6/24/74 - 3/31/75

Summary:

As people live longer, as labor market demands change, and as the notions of second careers and second educational chances for adults gain acceptability, interest in education leave program has grown. There seems to be much to be learned from the European experience with worker education. The contractor will analyze programs of educational leave in the Netherlands, Denmark, Belgium, Italy, Sweden, and Yugoslavia intended to facilitate employee participation in educational programs. Programs established through legislation, through collective bargining, and through other mechanisms will be examined.

The contractor will compare the same characteristics in all programs. Reports will discuss organization, financing, available educational opportunities, and participation in these programs. A conference of international experts in the field of recurrent education programs will be held in December 1974. The conference results and the individual reports will be published in Spring 1975 in English, French, Spanish and German.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
ABSTRACTS OF PROJECTS

IN PROGRAM AREA:

GUIDANCE, COUNSELING AND PLACEMENT

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Guidance, Counseling and Placement

Title: Career Counseling and Guidance for Home-Based Adults Project

Contract: Vivian Guilfoy
Education Development Center, Inc.
55 Chapel Street
Newton, Massachusetts 02158

Career Education Project
10 Darrance St., Suite 800
Providence, R. I. 02903

Contract No.:	NIE Project Officer:
NE-C-00-3-0121	Ella Johnston
Current Funding:	**Duration of Current Award:**
Fiscal 1974 $195,684.	10/1/74 - 9/30/75

Summary:

The "Home/Community Based" Project was designed to enhance the employability of adults. Many aduts have jobs they do not like, jobs with no opportunities for advancement or they lack the necessary personal and vocational skills for job entry. Adults are also faced with special problems as they attempt to upgrade their skills or gain new ones. This population is often unfamiliar with the educational and training opportunities available to them. Others who attempt to avail themselves of these opportunities find that courses are offered at inconvenient times, tuition costs are high, there are few counseling services tailored to their needs, and there are few supportive social services, such as day care for children. The Home Community Based project is exploring new ways to make career education available to these adults. This project has designed a counseling and guidance service for at-home adults who are considering entry into the labor market. The target population is primarily of women who no longer have child-rearing responsibilities, youth who are not at school but wish to get additional training before seeking employment, and retired adults who wish to explore part-time employment options. A variety of multi-media outreach strategies have been designed to reach this broad population. Initial counseling services are provided over the telephone by paraprofessional counseling aides.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Guidance, Counseling and Placement

Title: Career Counseling Service Report

Contractor: Dr. Anita Hughes
1250 4th Street, SW.
Washington, D.C. 20024

Contract No.:	NIE Project Officer:
NIE-C-74-0057	Lois-ellin Datta
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $6,000.	3/1/74 - 10/31/74

Summary:

The Career Counseling Service is an innovative approach to providing information about educational and occupational opportunities in the Providence, Rhode Island area. Focusing on people who are now at home but are thinking of re-entering the world of education or of work, the Center offers telephone counseling and guidance services. The report will describe the history of the center, its philosophy of operation, how it informs people of the services available, the selection and training of telephone counselors, and information on the cost and effectiveness of the approach. The report will also provide information on other approaches to career counseling for adults.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Guidance, Counseling and Placement

Title: Career Decision Making

Contractor: Dave Winefordner
Applachia Educational Laboratory
P.O. Box 1348
Charleston, West Virginia 25325

Contract No.:	NIE Project Officer:
NE-C-00-3-0093	Lance Hodes
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $527,749.	12/1/72 - 7/31/75

Summary:

Decisions! Something people are faced with in everyday life. Whether they are critical diplomatic decisions, everyday business decisions, or personal career decisions, two elements are basic to good decision-making: (1) a thorough understanding of the situation and the factors involved, and (2) current, accurate, and readily understandable information.

According to labor market statistics, magazines, and newspaper articles, every day millions of individuals face career decisions ranging from unemployment to the lack of satisfaction in the jobs they hold. Teenagers are the hardest hit, although a lot of occupational information is available and many exploratory experiences are being provided for secondary school youth. Information and experience are not usually brought together, however, in ways readily useful ways.

As part of a national effort to develop career education programs to meet these programs, the Appalachia Educational Laboratory is developing a Career Decision-Making Program for secondary school students. This program consists of fifteen instruction units built around factors related to career decision-making and includes a unique Career Information System, thus providing students with the two basic elements for decision-making.

The program will help provide a vital linkage between the career education development efforts being supported by the National Institute of Education and efforts of the Department of Labor through its comprehensive manpower legislation and programs.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Guidance, Counseling and Placement

Title: Career Planning Support Systems

Contractor: Don Findlay
Center for Vocation Education
Ohio State University
1900 Kenny Road
Columbus, Ohio 43210

Contract No.:	NIE Project Officer:
NE-C-00-3-0079	Lance Hodes
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $789,920	2/1/73 - 1/31/75

Summary:

Millions of high school students are believed to graduate every year lacking adequate skills to choose and plan careers. One problem is insufficient guidance to help them pursue fulfulling careers and make decisions affecting their futures. Research has shown that guidance programs attempt to offer more services than the schools can adequately support. Counselors are over-extended and have little time to assist students individually. In short, career guidance programs are often ineffective and are in serious need of upgrading.

The Career Planning Support System is designed to help schools upgrade career guidance programs, more closely matching resources and services. Techniques of assessing student needs and resources within the school and community are used to develop a realistic, workable guidance program. The needs and occupational interests of all students are encompassed in the program. At the same time, the system is responsive to minorities and women as new and more varied opportunities become available to them in the world of work. This system will enable schools to design guidance programs reflecting their goals for their students within the resources.

linked to human attributes, including general vocational capabilities, cognitive and psychomoter abilities, sensory capacities, interests, and needs. Based on this research, the OAI can now be used to describe jobs, occupations, and occupational education programs in two ways: (a) in terms of their basic activities and conditions and (b) in terms of their estimated requirements of human characteristics as measured by standarized tests and inventories. In research currently underway, groups of occupations are being defined based on similarities in work activities and conditions as determined through OAI analysis.

Products will include (a) an activity preference (interest) inventory, (b) a set of occupational groups to which the student's interests can be related, (c) a set of occupational exploration (information) booklets corresponding to the occupational groups, and (d) a computer scoring and reporting system designed to integrate and facilitate the use of these materials by students, counselors, and teachers.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Guidance, Counseling and Placement

Title: A National Study of the Availability and Use of Manpower Data in Vocational Education

Contractor: John Coster
North Carolina State University
Center for Occupational Education
P.O. Box 5096
Raleigh, North Carolina 27607

Contract No.:	NIE Project Officer:
NE-C-00-3-0069	Lance Hodes
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $250,000	4/1/74 - 3/31/75

Summary:

How can we make better use of labor market data on education? This project will determine (1) the extent to which manpower data are available in vocational education program planning and operations; (2) what manpower data are needed by vocational education decision-makers and (3) the influence of agency organizational factors on the use of manpower data in vocational education at the State and local levels. On-site structured interviews will be conducted with regional, State, and local personnel. Respondents will be currently involved in supplying manpower data, or in the planning, and administration of vocational and career education.

The project will be guided by an inter-agency advisory committee that represents most of the principal user groups and developers of manpower data.

The final report will identify what changes are needed in collecting and reporting manpower data for educational planning purposes.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Guidance, Counseling and Placement

Title: Toward an Educational System Articulated with Adult Society

Contractor: John Coster
North Carolina State University
Center for Occupational Education
P.O. Box 5096
Raleigh, North Carolina 27607

Contract No.:	NIE Project Officer:
NE-C-00-3-0070	Lance Hodes
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $ 157,000.	2/1/73 - 1/31/75

Summary:

What does a job really require to do well? How can education best prepare people for jobs of their choice, give these job requirements?

Two basic premises underlie the Toward an Educational System Articulated with Adult Society Programs:

(a) If the purpose of education is to prepare the individual for a meaningful role in adult society, then we must relate activities in the educational setting to those encountered upon leaving that environment.

(b) An established technology, ergometrics (or quantitative activity analysis), can organize information about the domain of adult activities for use in educational development projects.

Applying ergometric technology, TESAAS developed an Occupation Analysis Inventory (OAI) containing a comprehensive set of 622 "work elements" describing various kinds of work activities and conditions. The OAI work elements were reduced to a fewer number of "work dimensions" representing basic types of activities and conditions in the world of work. The work elements were also

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Guidance, Counseling and Placement

Title: "Women: Issues of Career Guidance and Vocational Counseling"

Contractor: Dr. Helen Farmer
Human Interaction Research Institute
Kirkeby Center, Suite 1120
10889 Wilshire Boulevard
Los Angeles, California 90024

Contract No.:	NIE Project Officer:
NIE-C-74-0100	Ivan Charner
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $18,033.	6/1/74 - 1/1/75

Summary:

This project will gather and interpret labor market and career counseling information for use by women making career decisions. The project will synthesize existing studies to present: a) analyses of the role of women in the labor force and b) the special considerations which should be reflected in the vocational counseling and guidance approaches for women. The study consists of three phases that discuss the general and/or specific issues relating to counseling as it interacts with the educational-occupational process of women. The phases are:

(1) The critical analysis of studies on women in the labor force,

(2) A review of the theoretical and empirical analyses of the social, psychological and institutional issues that should be understood in any guidance and counseling program for women, and

(3) A detailed discussion of the implications that the findings of the two prior phases have for women in society and for counseling approaches and programs.

Products include a "counselor sourcebook, a "consumer report" and an annotated bibliography. The counselor sourcebook" will discuss techniques for counseling women and girls, special issues, the impact of recent legislation on women, a factual portrayal of women at work in the seventies, issues related to special groups of women, a discussion of needed changes, and where to get more information.

The "consumer report" will parallel the counselor sourcebook in content but will be geared to women and girls who are seeking information and/or counseling. The final product will be an annotated bibliography of all the studies reviewed for the product.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Guidance, Counseling and Placement

Title: The Development of Career Choices by Boys and Girls

Contractor: Rosalind C. Barnett
21 Partridge Hill Road
Weston, Massachusetts 02193

Contract No.:	NIE Project Officer:
NIE-C-74-0016	Mary Lou Randour
Current Funding:	**Duration of Current Award:**
Fiscal Year 1974 $4,440.	10/15/73 - 02/28/75

Summary:

This review of the literature examines the occupational and educational aspirations and expectations of girls and boys at different ages. Aspiration is defined as an individual's goal when no self-imposed or societal impediments are considered. Expectation is defined as the realistic assessment of what is possible when educational barriers, possible restriction on entering different careers, and extent of family and societal support are considered. If there is a gap between aspiration and expectation it is important to identify the reasons for it and the implications for its resolution.

The occupational choices of girls and boys differ at an early age. Some reports have suggested that as early as the fourth grade most girls have limited their occupational choice to four options: teacher, nurse, secretary, or mother. At the same age, boys rarely have so high a proportion of choice in any one occupation and their choices are distributed along a variety of high and lower status jobs.

The report "Occupational and Educational Aspirations and Expectations: A Review of Empirical Literature" is available from the Career Education Program, National Institute of Education, Washington, D.C. 20208.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Guidance, Counseling and Placement

Title: Use of Interest Inventories

Contractor: Francis Burtnett
American Personnel and Guidance Association
National Career Information Center
1607 New Hampshire Avenue, N.W.
Washington, D.C. 20009

Purchase Order No.:	NIE Project Officer:
NIE-P-74-0017	Mary Lou Randour
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $2,100.	11/6/73 - 12/6/73

Summary:

The product of this project is a paper entitled, "An Inventory of Interest and Work Value Inventories." This report provides information on the use of career interest inventories which was used as background information for a CEP study of sex bias in career interest inventories.

This paper answered the following questions:

1. Which interest inventories are most frequently used: Are they required by any systems?

2. What criteria is used for the selection and use of interest inventories?

3. What are the costs of each inventory, and the ease and time of administration?

Copies of the report are available from the Career Education Program, National Institute of Education, Washington, D.C. 20208.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Guidance, Counseling and Placement

Title: Learning Kit for Guidance Counselors and Counselor Educators to Aid in the Delivery of Sex Fair Counseling

Contractor: Patricia Cook
Abt Associates, Inc.
55 Wheeler Street
Cambridge, Mass. 02138

Contract No.:	NIE Project Officer:
NIE-C-74-0141	Mary Lou Randour
Current Funding:	**Duration of Current Award:**
Fiscal Year 1974 $63,843.	6/30/74 - 3/30/75

Summary:

Counselor training is vitally important particularly in providing sex fair career guidance. The product of this study will be a learning kit to help counselors deliver sex fair guidance and counseling. The learning kit will have five major sections: (1) orientation - will alert the user to the occurrence of sex role stereotyping in some career guidance materials and in society; 2) instructions for determining sex bias and sex fairness in interest inventories - will instruct counselors on how to evaluate interest inventories for sex bias and sex fairness; (3) suggestions for sex fair administration and/or interpretation - will offer suggestions for reducing or eliminating sex bias in the adminstration and/or interpretation of interest inventories; 4) identification of sex biased and sex fair counseling procedures - will instruct counselors on the ways that sex bias may occur in counseling and provide suggestions for avoiding it, and 5) annotated resource guide to materials helpful in delivering sex fair counseling.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Guidance, Counseling and Placement

Title: Review, Index, Design, Organize and Prepare Manuscript for GPO Publication

Contractor: Mr. William Frazer
300 North State Street, Apt. 2908
Chicago, Ill. 60601

Contract No.:	NIE Project Officer:
NIE-C-74-0101	Nancy Hunt
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $4,000.	5/30/74 - 10/30/74

Summary:

One of the products of the study of Sex Bias and Sex Fairness in Interest Inventories will be a book of the commissioned papers, minority reports, and guidelines for determining sex bias in interest inventories. The actual publication will be handled by GPO. Mr. Frazer will provide editorial assistance in preparing the book, "Issues of Sex Bias and Sex Fairness in Career Interest Measurement."

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Guidance, Counseling and Placement

Title: Workshop on "Sex Bias and Sex Fairness in Career Intrest Inventories"

Contractor: Lawrence Johnson and Associates
Washington, D.C.

Contract No:	NIE Project Officer:
NIE-C-00-3-0060	Mary Lou Randour
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $42,199.	12/73- 9/31/74

Summary:

Proposed guidelines for assessing sex bias and sex fairness in career interest inventories were reviewed at the workshop. Workshop participants included test publishers and constructors, psychologists, counselors, educators, representatives from educational organizations, education officials, and government personnel.

Copies of the guidelines, "Guidelines for Assessment of Sex Bias and Sex Fairness in Career Interest Inventories" are available from the Department of Health, Education, and Welfare, National Institute of Education, Career Education Program, Washington, D.C. 20208.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Guidance, Counseling and Placement

Title: Report on Conference on Freeing Sex Roles for New Careers

Contractor:
Janice Birk
Counseling Center
University of Maryland
College Park, Maryland 20742

Nancy Schlossberg
Director, Office of Women in Higher Education
1 Dupont Circle, N.W.
Washington, D.C. 20036

Purchase Order No.:

NIE-P-74-0217
NIE-P-74-0218

NIE Project Officer:

Mary Lou Randour

Current Funding:

Fiscal Year 1974 $1,200.

Duration of Current Award:

6/20/74 - 12/31/74

Summary:

Colleges all over the country are moving to improve career guidance for their students. Workshops for counselors in such programs is believed to be one inexpensive and effective way of upgrading career counseling services. Is it? The report of a conference on "Freeing Sex Roles for New Careers" (NE-C-00-3-0060, $3,678. FY 1974) will include analysis of participant evaluation of conference effectiveness in suggesting counseling is free of sex role sterotypes, delivering this type of counseling, and instituting programmatic changes. Also studies will be what program changes participants instituted at home institutions, what methods were used to institute program changes, and the success and shortfalls of these program changes.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
ABSTRACTS OF PROJECTS

IN PROGRAM AREA:

CURRICULUM

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Curriculum

Title: Field Test and Revision of 88 Career Education Curriculum Units

Contractor: James Dunn
American Institute for Research
3301 New Mexico Avenue, N.W.
Washington, D.C. 20016

Contract No.:	NIE Project Officer:
NIE-C-74-0142	Robert I. Wise
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $500,000.	6/30/74 - 6/30/75

Summary:

Curricula bringing together academic and vocational skills are needed for implementing career education in the nation's schools. Forty five such units have already been field tested and revised. This contract will field test and revise the remaining 64 CCEM career education curriculum units developed by the Ohio State University's Center for Vocational and Technical Education in cooperation with six local education agencies. The field test will: (1) evaluate the quality, utility, and effectiveness of the units; (2) determine the conditions under which the units do and do not perform as intended; (3) indicate the units' acceptability to students, teachers, administrators, and parents; (4) assess the cost of implementing the units in school districts; and (5) provide information to guide revision of the units.

The revision effort is intended to: (1) maximize unit effectiveness in producing intended student outcomes (cognitive, affective, and psychomoter); (2) maximize the acceptability and utility of the units; (3) minimize the cost of purchasing and implementing the units (without sacrificing quality, utility, and effectiveness); and (4) ready the units for publication.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Curriculum

Title: Development of a Career Education Occupational Exploration Program

Contractor: Brian Fitch
The Ohio State University
Center for Vocational Education
1900 Kenney Road
Columbus, Ohio 43210

Contract No:	NIE Project Officer:
NE-C-00-4-0012	Robert I. Wise
Current funding:	Duration of Current Award:
Fiscal Year 1974 $ 696,898.	9/01/73 - 6/30/75

Summary:

The occupational exploration program assists 8th and 9th grade students in learning about careers; acquiring experience in work related tasks under work-related conditions; and synthesizing information and experiences related to the world of work with personal attitudes, interests, and aptitudes.

Through a previous subcontract with the Human Resources Research Organization, CVE developed an occupational clustering system: natural resources, construction, manufacturing, transportation and communication, trade and finance, government, education, health and welfare, personal services, arts and humanities, product services,, and recreation and entertainment. The program will include one simulation module , one community involvement module and one occupational information resource module in each of the 12 clusters.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Curriculum

Title: Learning Resource Activities: A Teacher's Guide

Contractor: Peter Finn
Abt Associates, Inc.
55 Wheeler Street
Cambridge, Massachusetts 02138

Contract No.:	NIE Project Officer:
NIE-C-74-0129	Victoria Cowles
Current Funding:	**Duration of Current Award:**
Fiscal Year 1974 $56,898.	6/25/74 - 3/30/75

Summary:

Practical ideas on how to use the community as a classroom will be suggested in this guide. Learning activities at both the elementary and secondary levels related to the world of work will be described. Activities will include "hands-on" experiences or simulating of work situations in various career areas; and how to use internal (in-school) and external (community) resources such as other teachers or school staff, field trips, speakers from local business or community organizations, informational and educational sources provided by local industrial concerns, etc. Teachers can use this publication directly since there will be nothing additional they need to order. Teachers will also be aided by a cross-index between teaching methods and subject areas for awareness, exploration, and preparation levels.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Curriculum

Title: Career Education Instructional Materials: A Compendium of Information

Contractor: Kenneth Komoski
The Educational Products Information
Exchange Institute (EPIE)
463 West Street
New York, New York 10014

Contract No.:	NIE Project Officer:
NIE-C-74-0138	Victoria Cowles
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $108,329.	6/30/74 - 3/30/75

Summary:

This user's guide to career education will analyze existing commerical and non-commerical career education instructional materials including curriculum units, films, slides, teachers' guidance, simulations, workbooks, etc. Each will be described with regard to basic content, costs, developmental source, intended age or grade groupings for use (if specified), time required to administer, personnel required, necessary training, user evaluation data, and additional descriptive and evaluative information on factors such as existing or potential sex or ethnic biases. Materials to be used with preschool children through adults, sections or notions on materials for special populations such as the handicapped, gifted bilingual learners, women, current or ex-offenders, etc. will be included. A "Works In Progress" section will cover materials under development but not yet available for distribution. The publication is intended to assist teachers, curriculum specialists and/or others within the school systems in selecting instructional materials related to career education goals, providing suggestions to aid integration of career education into existing programs.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Curriculum

Title: A Facilities Handbook for Career Education

Contractor: George Gage
System Development Corporation
2500 Colorado Avenue
Santa Monica, California 90406

Contract No.:	NIE Project Officer:
NIE-C-74-0143	Victoria Cowles
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $ 88,029	6/30/74 - 3/30/75

Summary:

School administrators and their staff have asked how they can use available equipment in designing a facility to meet the goals of their career education efforts. The handbook will describe the use of existing or potential space and equipment for career education facilities at various levels of a K-12 program, and be organized by educational level setting, district size and available funding levels. Within these categories, ideas will be indexed by subject areas, specific careers, and categories, such as "use of existing classroom" or "construction of small facilities". The handbook will contain detailed representations of diverse facilities, including floor plans with equipment shown, photographs of spaces in use and a complete selection of specifications for the equipment used in the represented facilities. The use of space will be discussed in such situations as a typical classroom, mobile or modular units, space purchased or rented outside school property (e.g. a warehouse to convert) and space donated by business or industry. In addition, a practical "how-to" section will consider how to deal with legal authorities and building codes, recognize what activities certain facilities will support, and determine the relative cost effectiveness of alterations vs. new construction.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Curriculum

Title: Case Studies and Annotated Listings

Contractor: Danna Warner
Abt Associates, Inc.
55 Wheeler Street
Cambridge, Massachusetts 02138

Contract No.:	NIE Project Officer:
NIE-C-74-0129	Victoria Cowles
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $78,648.	6/25/74 - 3/30/75

Summary:

We often learn most from sharing the ideas and experiences of others; interest is high in "what's happening" in career education. Intended for school decision makers, and the general and business/industry/labor communities, this document will consist of 15-20 detailed annotated listings of effective career education programs. Programs will be selected as examples of innovative approaches relating academic and career learning for students. Of particular interest are programs that combine the learning of academic skills with psychomoter skills development; counseling and placement programs responsive to the students' interests as well as to projected occupational opportunities; and programs in which the students, staff, and members of the community may have a vested interest in the form of such contributions as capital investments, human or materials resource contributions, employee screening, or community development. Programs selected will represent a wide range of demographic characteristics, target populations, cost configurations, and organizational and programmatic differences. The case studies will add to the information base by portraying what kinds of programs are being tested in different situations, what needs have been assessed, which ones are being addressed, what resources are essential or desirable for establishing these programs, and successes or shortcomings in implementation.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Curriculum

Title: A Procedural Field Test Instrumentation Monograph

Contractor: Michael Halbert
Institute for the Study of Inquiring System
3508 Market Street
Philadelphia, Pa. 19104

Contractor No.:	NIE Project Officer:
NIE-C-74-0014	David Hampson
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $22,673.	10/22/73 - 2/22/74

Summary:

ISIS will develop two monographs to capture the knowledge base developed by ISIS during its work on the field testing of 45 curriculum units in the CCEM Model I Program.

Monograph I will be a procedural manual to assist research groups that wish to use innovative productive tests developed by ISIS for the Model I Program.

Monograph II will be an interpretive and analytical overview of the role of ISIS in the Model I Program and emphasis on the possible improvements in the design, management, conduct, analysis, and reporting of the curriculum unit tests. It will also contain suggestions for overall improvements in the field test process.

The monographs should help advance our ability to measure what young children are learning from educational experiences. The productive tests represent a new approach to educational assessment that could have far-reaching implications; the monographs should stimulate discussion of this approach.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Curriculum

Title: Planning Activities to Guide the Implementation of Career Education Products and Activities

Contractor: (See Below)

Contract No.: (See Below)

NIE Project Officer:

David Goodwin

Current Funding:

Fiscal Year 1974 (See Below)

Duration of Current Award:

2/1/74 - 10/31/74

Summary:

The six (6) local school systems which cooperated with CVTE in the CCEM curriculum development effort have been awarded grants to plan a career education program and appropriate implementation strategy. To encourage realistic planning activities NIE did not provide funds for implementation of career education plans. In planning for career education, school systems specified program objectives, target groups, time-schedules for implementation; assessed needed resources in light of available funds; and outlined a strategy for implementing career education plans.

This planning activity is part of a larger NIE study that will examine:

1. how school systems design a cohesive career education program integrating an NIE-developed curriculum, commerically developed career education curricula, and locally developed programs

2. the relationship between planning for career education and school system decision-making

3. the effectiveness of various strategies for implementing career education and barriers encountered in translating plans into school practice

School District	Contract No. and Cost
Wes Maas School District of the City of Pontiac 1830 West Square Lake Road Pontiac, Michigan 48055	NIE-C-74-0040 $46,970.00
William Raymond Mesa Public Schools 549 North Stapley Drive Mesa, Arizona 85203	NIE-C-74-0043 $50,000.00
Robert Sampieri Los Angeles City Unified School District Box 3307 Los Angeles, California 90051	NIE-C-74-0038 $50,000.00
Helen Cook Atlanta Public Schools 224 Central Avenue, S.W. Atlanta, Georgia 30303	NIE-C-74-0039 $50,000.00
Robert Blum Jefferson County Public Schools 809 Quail Street Lakewood, Colorado 80215	NIE-C-74-0041 $49,998.00
Irvin Moskowitz Hackensack Public Schools Hackensack, New Jersey 07601	NIE-C-74-0042 $49,980.00

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Curriculum

Title: Case Study of the Planning Process for the Implementation of Career Education Products and Activities.

Contractor: (See Below)

Contract No.: (See Below) NIE Project Officer:

David Goodwin

Federal Funds: (See Below) Duration of Current Award:

2/21/74 - 11/20/74

Summary:

NIE is supporting development of curriculum units in career education for grades K through 12; these materials have been awaited with much interest from the field. Little is known, however, about the adoption, adaptation, and abandonment of educational innovations such as career education, and the use of specific materials. It has been suggested, for example, the curricula should be left "half-finished" for local completion.

These contracts are for six case studies of the implementation of career education in the LEAs that developed the CCEM career education units. The case studies chronicle activities central to the planning process in the LEAs, taking particular note of key decision points, individual groups, or other factors that influence decision making and studying how such influence was brought to bear. The decision making process, including establishing career education objectives, assessing educational needs, practices, and available resources will be studied. In addition, the case studies will report the range of career alternatives considered, the means by which program components, target groups and implementation strategies are selected, and the manner in which planning intersects decision making authority in the district.

The case studies are themselves one of four parts of a study of educational change related to career education. The other three parts are: (1) a history and analysis by the LEAs of how the curriculum materials were developed, (2) planning grants for the implementation of career education, (with actual implementation dependent on LEA or other funds), and (3) a sociological survey of actual implementation of the plans described by the case studied. This set of four reports should give much insight into factors that inhibit or facilitate career education and educational change.

These studies were carried out in the following districts:

School District	Contractor	Contract No. & Cost
Atlanta, Georgia	Kathryn A. Blake University of Georgia College of Education Athens, Georgia 30601	NIE-C-74-0053 $6,095.00
Pontiac, Michigan	Cas Heilman College of Education Michigan State University East Lansing, Michigan 48824	NIE-C-74-0054 $5,220.00
Los Angeles, California	Harry F. Silberman Graduate School of Education UCLA 405 Hilgard Los Angeles, California	NIE-C-74-0051 $6,980.00
Mesa, Arizona	Norman C. Higgins 1826 East Alameda Tempe, Arizona 85282	NIE-C-74-0052 $6,822.00
Jefferson County, Colorado	William I. Goodwin Laboratory of Educational Research University of Colorado Boulder, Colorado 80302	NIE-C-74-0050 $5,785.00
Hackensack, New Jersey	Karen F.A. Fox 106 Morningside Drive, Apt. 38 New York, N.Y.	NIE-C-74-0055 $5,353.00

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Curriculum

Title: Career Education Curriculum Implementation in Six (6) School Districts

Contractor: Carl Rittenhouse
Stanford Research Institute
333 Ravenswood Avenue
Menlo Park, California 94025

Contract No.:	NIE Project Officer:
NIE-C-74-0105	David Goodwin
Current funding:	Duration of Current Award:
Fiscal Year 1974 $ 205,657.	6/1/74 - 12/01/75

Summary:

Educational research has contributed to improved education, but not as fully as hoped. Part of the problem is that the research end products aren't reaching their intended beneficiaries. Career education, as a new movement, particularly needs to improve ways of disseminating tested educational products.

The evaluative study examines the implementation of career education programs in six (6) school districts. Alternative implementation strategies followed by LEAs, and the effect of implementation strategies upon attitudes and behavior of teachers, administrators and curriculum specialists will be analyzed. The extent to which LEAs translate planned objectives into actual school practice, identifying what facilitates or impedes implementation of career education will be assessed.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Curriculum

Title: A Critical Survey, Review and Synthesis of Research on Curriculum Implementation

Contractor: Michael Fullan and Alan Pomfret
Ontario Institute for Studies in Education
252 Bloor Street West
Toronto 5, Ontario Canada

Contract No.:	NIE Project Officer
NIE-P-74-0122	David Goodwin
Current funding:	Duration of Current Award:
Fiscal Year 1974 $ 2,000.	3/28/74 - 5/28/74

Summary:

The Career Education Program is studying the procedures by which career education is implemented in six (6) school districts, focusing on the use of various implementation strategies and their effects upon attitudes and behavior of teachers, administrators, and curriculum specialists. During preparation for the study, it became apparent that major gaps exist in our understanding of the curriculum implementation process.

The commissioned paper will enhance current research efforts by clarifying previous research in curriculum implementation.

Dr. Fullan will survey the literature in curriculum implementation, with particular reference to issues of definition, measurement, research methodology and findings. He will then write a paper discussing (a) definitions of curriculum implementation used in previous research, (b) outcome measures used to operationalize alternate definitions of curriculum implementation and the instruments for measuring these variables, (c) various methodological approaches to the study of curriculum implementation, (d) findings from previous research, focusing upon predictors and barriers to successful curriculum implementation, and (e) policy recommendations for future research.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Curriculum

Title: Establishing Directions and Priorities for School Based Career Education

Contractor: Joseph Schwab
The Center for the Study of Democratic Institutions
Box 4068
Santa Barbara, California 93103

Contract No.:	NIE Project Officer:
NIE-C-74-0048	David Hampson
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $38,936.	2/5/74 - 9/4/74

Summary:

The principal investigators will prepare two documents: (1) a set of analysis and recommendations concerning school-based career education purposes and programs and approaches to the design of platforms for the development of such programs and (2) a guide to assist practitioners in designing platforms for program development. The major purpose of the first document is to assist the staff of the School-Based Career Education Project in planning forthcoming program development efforts. The major purpose of the second document is to make the results of this effort available to all program developers. At least ten outside consultants--representing a variety of approaches to program development, views about career education, backgrounds, components of the world of work, etc. -- will be selected to participate in an early planning meeting and to review the principal investigators' work. Recommendations will be based on analyses of already-existing documents, suggestions made by reviewers, and the principal investigators' own knowledge of approaches to program development.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Curriculum

Title: Career Education Product Installation Handbook

Contractor: Don Findlay
Ohio State University
Center for Vocational Education
1900 Kenny Road
Columbus, Ohio 43210

Contract No.:	NIE Project Officer:
NE-C-00-3-0080	Lance Hodes
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $ 146,250.	02/01/73 - 10/30/75

Summary:

New discoveries in education are frequently used in a limited way long after they are available or are not used at all. Something may be wrong with the idea itself or when it is introduced. Another problem may be the way new ideas are introduced.

During the installation of new career education practices, many decisions must be faced: How should the potential user be made aware of the product? What characteristics of the product should be stressed? Can the product be easily installed?

While each problem is in part unique to the situation, the potential adopters of new career education practices do not have a reference book to help determine what might work best in the local situation. The vast array of products necessary for the installation of career education multiplies the problem of selecting the most appropriate product.

To improve the rate of use for new products and to help those who install career education practices in the schools, this program is developing the Career Education Product Installation Handbook. The handbook will provide guidelines for the formulation of implementation strategies. Users of the handbook should be better able to judge likely reactions to the career education product being introduced and evaluate the tactics used in the process.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Curriculum

Title: Management Information Systems for Vocational Education

Contractor: Don Findlay
Ohio State University
Center for Vocational Education
1900 Kenny Road
Columbus, Ohio 43210

Contract No.:	NIE Project Officer:
NE-C-00-3-0076	Lance Hodes
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $250,000.	02/01/73 - 07/31/75

Summary:

Decisions by policy-making bodies regarding resource allocations for vocational education programs frequently are based on evidence of program effectiveness, relevance to social and economic conditions, and responsiveness to community, State, and Federal concerns. State vocational education divisions need to ensure that their vocational education programming is a rational and responsive process, accountable to the public.

State divisions of vocational education must have some systematic means of collecting and using the necessary management information. Unfortunately many current data systems are often of limited usefulness because of deficiencies in quantity, quality, accessibility, or flexibility.

The Management Information System for Vocational Education (MISVE) addresses these problems, largely through the design of computer programs. The system, with only modest changes in the basic package can be adapted by users with differing requirements.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Curriculum

Title: Performanced-Based Professional Education Curricula

Contractor: Don Findlay
Ohio State University
Center for Vocational Education
1900 Kenny Road
Columbus, Ohio 43210

Contract No.:	NIE Project Officer:
NE-00-3-0077	Lance Hodes
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $ 394,000	02/01/73 - 07/31/75

Summary:

Vocational education programs have undergone rapid changes and expansion over the last few years. New and expanded programs require improvements in the traditional preparation of teachers. Many teacher education programs are not developing adequately those practical teaching skill competencies which teachers most need. Too often, teacher educators have had to follow prescribed course-by course sequences regardless of individual student needs. Repetitious courses too often are required in every vocational field, even through many competencies are common to all.

This program is intended to improve these conditions by developing new curricula for teacher education. Approximately 120 learning packages, or modules, are being designed to be used in all vocational teaching fields and many can be applied to other teaching areas. Each module centers on specified teaching competencies. Modules can be selected to correspond to individual student teacher needs.

The new materials will prepare teachers to meet specific performance standards designed to improve the teaching of career skills, knowledge, and attitudes necessary for students entering their chosen occupations. In addition, the modules enable teacher educators to design curricula to meet the individual needs of teachers in preparation.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Curriculum

Title: Methods for Curriculum Content Derivation

Contractor: Don Findlay
Ohio State University
Center for Vocational Education
1900 Kenny Road
Columbus, Ohio 43210

Contract No.:	NIE Project Officer:
NE-C-00-3-0078	Lance Hodes
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $ 308,000.	2/1/73 - 1/31/75

Summary:

What skills do you teach a high school senior who wants to become a key-punch operator? How do you find out the industry demand for key-punchers, and if you know it, how can you be sure the demand will be there when the students graduates? A method to select the content for any given course of study would help resolve some of the problems of preparing students for careers.

In this study, performance content is defined as the tasks (i.e., meaningful types or units of work activity) performed by workers in an occupation, and the technical concepts (i.e., knowledge having practical application on the job) required in the performance of the job tasks. The course content derivation technique is an adaptation of the task inventory procedures. This technique permits a comprehensive gathering of task information from persons knowledgeable about the work as it is performed on the job.

The products will include a set of user procedures and guidelines to derive curriculum content at an early stage in the development of occupational training programs. After testing, these instructions will be packages as user manuals. The manuals will contain explicit, detailed directions along with illustrative materials. Although the manuals are intended primarily for application by curriculum developers in public secondary and post-secondary education, the procedures should be applicable in job and manpower training programs.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
ABSTRACTS OF PROJECTS

IN PROGRAM AREA:

FINANCIAL BARRIERS

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Financial Barriers

Title: Book on Recurrent Education

Contractor: Selma J. Mushkin
Office of Sponsored Programs
Georgetown University
Washington, D.C. 20002

Contract No.:	NIE Project Officer:
NE-C-00-4-0002	Nevzer Stacey
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $ 15,889.	07/15/73 - 02/15/74

Summary:

The product is compilation of papers from an international conference on recurrent education. An editorial summary, index, and bibliography are included in the published volume: Recurrent Education, Selma J. Mushkin, ed., National Institute of Education, U.S. Department of Health, Education and Welfare, U.S. Government Printing Office, 1974, Stock No. 1780-01277.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Financial Barriers

Title: Strategies for the application of foreign legislation on paid educational leave to the U.S. scene

Contractor: Herbert A. Levine
Rutgers University
State University of New Jersey
New Brunswick, New Jersey 08903

Contract No.:	NIE Project Officer:
NIE-C-74-0107	Nevzer Stacey
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $10,500.	6/28/74 - 12/28/74

Summary:

This policy paper will recommend strategies for applying legislative acts on paid educational leave in France, Germany, and the United Kingdom to the United States.

The first section of the paper will analyze changes in the economy in the three countries as they react to the development and implementation of the legislative acts. The second section will describe the different types of financial assistance (national, state, local[1] and private[2]) for educational activities available to an adult who is (or is about to be) employed in the three countries and the U.S. The third section will recommend policies related to paid educational leave for the U.S. It will include an in-depth discussion of the ways to implement and finance educational leave for adults through:

1. national laws or regulation
2. state laws or regulations
3. local government laws or regulations

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[1] city, town, community
[2] including unions and employees programs

4. private agreements (e.g. union contracts)
5. other policies not included above

The fourth section will recommend strategies to implementing the proposed plans for paid educational leave.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Financial Barriers

Title: Review and analysis of the Industrial Training Act of 1964 in the United Kingdom

Contractor: Mr. P. J. C. Perry
British Association for Commerical
and Industrial Education
16 Park Crescent
London WIN 4 AP England

Contract No.:	NIE Project Officer
NIE-C-74-0097	Nevzer Stacey
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $ 5,840.	5/30/74 - 9/30/74

Summary:

The United Kingdom's Industrial Training Act of 1964 provided for the creation of industrial training boards for different branches of the economic sector including some nationalized, industries and government services. Since 1964, 29 training boards have been set up covering over 15 million employees. These boards provide courses and other facilities to train people employed or aiming at employment in various occupational sectors. The boards ensure the financing of vocational training and have statutory powers to tax employers in the industry. At the same time, the Government may make grants and loans to industrial training boards out of public funds. The amounts of the grants vary from one industry to another, ranging from full fees, salary, travelling expenses and subsistence allowance, to fixed weekly or monthly amounts.

This study will provide us with:

1. a summary of the Industrial Training Act:
   its history and development
2. an in-depth discussion of the legislation
3. a discussion of problems in implementing the Law,
   including the recent modification of the Law, and
4. expectations arising from the passage of the Law.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Financial Barriers

Title: Review and analysis of the German Law of 1969

Contractor: Dr. Hedwig Rudolph
Spessartstr 9
1000 Berlin 33
Federal Republic of Germany

Contract No.:	NIE Project Officer:
NIE-C-74-0095	Nevzer Stacey
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $ 6,490.	5/30/74 - 9/30/74

Summary:

In the Federal Republic of Germany, the Acts relating to vocational training, training promotion, and employment promotion contain provision for the financial support of persons undergoing training. Under the Training Promotion Act, financial assistance is made available to persons under 35 years of age who attend technical secondary schools or technical colleges during the day or evening. Trainees who complete a practice period are entitled to the same financial assistance. This financial support, which takes family income into account, may also be given as an interest free loan when the training is of above-average duration. For persons employed while undergoing training, financial allowance may be granted for the duration of training.

This study will provide us with (1) an historical, social, economic and political analysis of the above Law, (2) an in-depth description of the Law related discussion of the legislation (3) the problems in implementing the Law and (4) the future expectations arising from the passage of the Law.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Financial Barriers

Title: Review and Analysis of the Act of July 16, 1971, France

Contractor: Jean-Pierre Clerc
Le Monde
5 Rue Des Italiens
Paris - CEDEX 09 - France

Contract No.:	NIE Project Officer:
NIE-C-74-0096	Nevzer Stacey
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $ 6,740.	5/30/74 - 9/30/74

Summary:

The principle of maintaining vocational training as an integral part of lifelong education was established in France, by the Act of July 16, 1971. The training consists of initial or continued training for adults and young people who are in or are about to enter, employment. The stated purpose is to enable workers to adapt to changes in techniques and in conditions of work and to promote their social advancement and participation in cultural, economic and social development.

This legislation is unique. It approves the granting of leave for related general education and it applies to youth as well as to adults.

This study will provide an historical, social, economic and political analysis of the above legislation; an in-depth description of the Law; the problems in implementing the Law and the expectations arising from the passage of the Law.

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NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
ABSTRACTS OF PROJECTS

IN PROGRAM AREA:

ALTERNATIVE SETTINGS

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Alternative Settings

Title: The Development and Stabilization of an Experience-Based Career Education Program, and Phase I Replication Planning

Contractor: (See Below)

Contract No.: (See Below)	NIE Project Officer:
	John O'Brien
Current Funding:	Duration of Current Award:
Fiscal Year 1974: (See Below)	9/30/74 - 9/30/75

Summary:

The four experience-based projects are developing a comprehensive and personalized program for high school age youth that relies on community participation - employers, union, public agencies, school, parents etc. The basic assumption is that, for some students, academic, career, and personal learning are best fostered through extensive contact with adults inside the economic institutions where the productive activities of society take place. The program focuses on direct experience in a wide variety of work settings to better prepare young people for life. Because EBCE is individualized and its educational environment is the entire community, it is appropriate for all kinds of students from merit scholars to drop-outs. Objectives of the program include:

- the delivery of all or most of a student's educational program through community resources for full academic credit

- a technique of systematic analysis of community/employer institutions for student learning opportunities

- the integration of cognitive skill building into student's career development and experiential learning activity
- the inclusion of non-school community adults as full partners in the education of local youth

The basic objectives of the EBCE Phase I replication effort are

- to have each project establish a relationship between itself and the local school system regarding prototype continuation during FY 75 and 76
- to obtain insights and reactions of potential EBCE replications to the current project
- to establish a pool of potential EBCE replication sites while conducting a marketing survey to determine the support necessary to install EBCE
- to design and implement a public relations program to make critical EBCE audiences aware of the program
- to define the "critical mass" of EBCE or those components that are essential to the program that should be retained in first generation adoption efforts.

Location	Contractor	Contract No. & Cost
Philadelphia, Pennsylvania	Louis Maguire Research for Better Schools, Inc. 1700 Market Street Philadelphia, Pa. 19103	NIE-C-00-4-0011 $1,356,333.00
Tigard, Oregon	Rex Hagans Northwest Regional Educational R&D Laboratory Lindsay Building 710 S.W. Second Avenue Portland, Oregon 97204	NIE-C-00-4-0010 $989,096.00

Location	Contractor	Contractor No. & Cost
Oakland, California	Robert Peterson Far West Laboratory for Educational Research and Development 360 22nd Street Oakland, California 94612	NIE-C-00-4-0009 $1,092,380.00
Charleston, West Va.	Harold Henderson Appalachia Educational Laboratory, Inc. Post Office Box 1348 Charleston, West Virginia	NIE-C-00-4-0008 $1,139,313.00

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Alternative Settings

Title: Assistance in the Review of EBCE Projects' Site Analysis Procedures

Contractor:
Mr. Charles Foltz
Weston Associates
7 Columbine Road
Weston, Mass. 02193

Contract No.:	NIE Project Officer:
NIE-C-74-0104	Bernard Yabroff
Current Funding:	**Duration of Current Award:**
Fiscal Year 1974 $10,500.	6/1/74 - 11/15/74

Summary:

This project is designed to assist NIE-CEP in reviewing and assessing the employer site analysis procedures by each EBCE project, identify relationships between EBCE site analysis procedures and instructional plans for students in each project, identify gaps and limitations in existing site analysis procedures and recommend improvements, and determine potential implications of site analysis procedures for other experiential education programs.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Alternative Settings

Title: R&D Mongraph on Experience-Based Career Education Program

Contractor: Dr. Keith Goldhammer
Dean, College of Education
Michigan State University
East Lansing, Michigan 48824

Contract No.:	NIE Project Officer:
NIE-C-74-0085	Mary Ann Millsap
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $29,600.	4/16/74 - 10/15/74

Summary:

The product will be a monograph describing the first 18 months of the NIE's Experience-Based Career Education (EBCE) program.

A tentative outline of the monograph follows:

Chapter 1: Conceptual Analysis and Review of Appropriate Literature
Chapter 2: Summary of Program Development Experiences
Chapter 3-6: Chapter on each Project-- organization, operation, and outcomes for the first and second development years
Chapter 7: Where We Are; What We've Learned; Where Do We Go From Here.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Alternative Settings

Title: Assessment of the Experience Based Career Education Program

Contractor: Carol Vale
Educational Testing Service
Princeton, New Jersey 08540

Contractor No.:	NIE Project Officer:
NIE-C-74-0118	Mary Ann Millsap
Federal Funds:	Duration of Current Award:
Fiscal Year 1974 $452,576.	6/17/74 - 12/31/75

Summary:

The study will assess the effectiveness of the four Experience-Based Career Education (EBCE) projects in terms of students' attainment of program objectives and in terms of viability of the EBCE concept as an alternative to traditional secondary education. Three phases of activity are anticipated: (a) a planning and measurement development phase, including such tasks as the analysis of curricula and student objectives and a review of available measures (both in use by the EBCE projects and those available elsewhere), (b) a preliminary operational phase to arrange the conditions required by the experimental, true control and comparison group design and pilot test instruments (as determined for the conceptual analysis) and (c) an operational phase consisting of the longitudinal evaluation of the effectiveness of the projects during the 1974-75 academic year (the third development year of the projects) and the preparation of test manuals for newly developed instruments.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Alternative Settings

Title: Research to Develop Questionnaires for EBCE

Contractor: Steven Frankel
Systems Development Corporation
2500 Colorado Avenue
Santa Monica, California 90406

Contract No.:	NIE Project Officer:
NE-C-00-4-0006	Mary Ann Millsap
Federal Funds:	Duration of Current Award:
Fiscal Year 1974 $23,244.	9/4/73 - 12/18/73

Summary:

Instruments developed under an OE contract were revised for use in the Experience-Based Career Education (EBCE) Programs. The tasks were

- to conduct item analysis of present questionnaire items
- to revise questionnaire items that are inappropriate and difficult to understand
- to construct new items (and questionnaires where necessary) to collect information from students , parents and employers at three different levels of program involvement (orientation, exploration, investigation).
- to field test new instruments at the four EBCE program sites
- to write supporting statement on forms construction, on appropriate methodological and analytical techniques and on possible outcomes and use of instruments.
- to write short conceptual paper on the differences between school-supervised work education programs, as assessed in the OE contract referenced above, and the experience-based career education programs.

All tasks were completed satisfactorily. The instruments are being used in EBCE data collection activities.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Alternative Settings

Title: Study of Practical Vocational Orientation Program (PYRO) in Sweden

Contractor: Dr. Robert Belding
608 Whiting Avenue
Iowa City, Iowa 52240

Contract No.:	NIE Project Officer:
NIE-C-74-0061	Nevzer Stacey
Federal Funds:	Duration of Current Award:
Fiscal Year 1974 $5,150.	4/15/74 - 7/31/74

Summary:

Practical Vocational Orientation (PYRO) is designed to help 7th to 9th grade students in Sweden acquire a concrete picture of the work environment and to instill commitment to the duties of the work place. In conjunction with other studies the program promotes awareness of career choices and provides a basis for independent decision in future choices concerning studies and work.

In the course of the program, students have the opportunity to form opinions about the conditions of different work places and to learn about the duties and demands of professional associations, unions, and other groups. The PYRO program is similar to the Experience Based Career Education Program (EBCE) currently being developed by NIE.

This study will investigate the origins, development and operation of the PYRO with special attention to:

- an in-depth description of the program as it operates today and the changes that have taken place in recent years;

- an analysis of the successes and problems of the program with special attention to the experience of students after they leave the program and how their activities have been affected by this experience;

- implications of the Swedish experience for similar programs in the U.S., especially of the EBCE type.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Alternative Settings

Title: Career Intern Program

Contractor: Ben Lattimore
Opportunities Industrialization Center, Inc.
100 West Coulter Street
Philadelphia, Pa. 19144

Contract No.:	NIE Project Officer:
NE-C-00-3-0122	Albert Cunningham
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $1,191,335	4/1/73 - 8/31/74

Summary:

The Career Intern Program (CIP) is an alternative high school for 11th and 12th graders who are drop-outs or potential drop-outs. CIP seeks to help students who are not doing well in the schools available to them by conbining the OIC determination that each individual can and must succeed with a career exploration and academic program leading to an immediate outcome the student wants to attain: a high school degree, entry into further technical training, into college, into an on-the-job training program, or to an above-entry level job. The first phase of the program is like a career counseling seminar, combining activities designed to motivate the student, to develop personal relationships between the intern and counselors, teachers and career developers, and to improve career awarness and career information. Throughout, the counselors, teacher and career developers work together as a team for almost all activities. After the intern has chosen her/his immediate goal, the second phase combines hands-on experience, academic courses, and further career training as needed until the interm has completed the program, usually a full year process. In Phase III, career specialization, the intern pursues his/her career plan with continued support from the CIP. The immediate and longer-term outcomes, and the costs of CIP participation are being compared with a true control group, and for various comparison groups in the Philadelphia area.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Alternative Settings

Title: Mountain Plains Rural Residential Career Education Program

Contractor: Bruce Perryman
Mountain-Plains Education and Economic Program, Inc.
P. O. Box 3078
Glasgow, Montana 59231

Contract No.:	NIE Project Officer:
NE-C-00-3-0298	Harold Johnson
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $412,650.	6/29/73 - 8/31/74

Summary:

Mountain Plains (MP) is a residential program for rural multi-problem families. Its primary mission is the economic rehabilitation of the head of the household (HOH), with comprehensive supporting services provided to other family members. Participants are recruited from six states (Montana, Idaho, North Dakota, South Dakota, Wyoming and Nebraska) through MP field offices. Services provided at MP include: a career development program for the HOH and spouse, including foundation education and job training; family counseling and guidance; medical, dental and optical services; home-maker training; and educational support for the children. Completion of the MP program is defined as achievement of the educational objectives set by the HOH at entry. Both completers and resignees receive placement and relocation support from the field officers.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Alternative Settings

Title: Preparation of Written Requirements, Reviews, Memoranda, and monograph on Mountain Plains' FY 74 Activities

Contractor: (See Blow)

Contract No.: (See Below)	NIE Project Officer:
	Michael Hock
Current Funding:	Duration of Current Award:
Fiscal Year 1974 (See Below)	3/15/74 - 11/15/74

Summary:

This study will prepare a monograph describing the efforts and results of the Mountain Plains Rural Residential Career Education Project during Fiscal Year 1974 and will assess the ability of both Mountain Plains and the NIE to define, develop, and undertake a large-scale research and development program in career education for rural disadvantaged populations in a residential setting. The monograph will be based on review of Mountain Plains products and activities in relation to written requirements. The monograph will be provided for administrators within NIE and other Federal agencies concerned with similar programs (e.g., the Department of Labor, Department of Commerce, and other offices of the Department of Health, Education, and Welfare), legislators at the Federal and state levels considering the support of such programs, and researchers concerned with similar efforts. The monograph will have five sections, each written by an expert in the field. Each is listed below with the cost of the contract.

Specialty Area	Contractor	Contract No. & Cost
Curriculum and Instructional Program	Steven Zifferblatt Assistant Professor of Education and Psychology Stanford University Stanford, California 94305	NIE-C-74-0065 $7,755.27
Summative Evaluation and Internal Formative Evaluation	Daniel L. Stufflebeam Director, Evaluation Center Western Michigan Univ. Kalamazoo, Michigan 49001	NIE-C-74-0064 $9,895.00
Research and Development Efforts in Guidance and Counseling	Edwin Herr Department of Counseling Psychology Pennsylvania State University University Park, Pa. 16802	NIE-0-74-0063 $5,925.00
Products of the Mountain Plains Occupational Programs	Louis Kishkunas Superintendent of Denver Public Schools 414 14th. Street Denver, Colo. 80202	NIE-C-74-0067 $19,440.00
Recruitment, Section, Placement and Follow-up Efforts	Robert Darcy Center for Economic Education Colorado State University Fort Collins, Colo. 80521	NIE-C74-0066 $6,030.00

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Alternative Settings

Title: Follow-up Study of Residential Career Education Program Participants and Related Studies

Contractor: Richard Bale
Abt Associates Inc.
55 Wheeler Street
Chambridge, Mass. 02138

Contract No.:	NIE Project Officer:
NIE-C-74-0147	Michael Hock
Current Funding:	**Duration of Current Award:**
Fiscal Year 1974 $566,292.	6/30/74 - 12/31/76

Summary:

The product of this 30 month study will be a report on how well the Mountain Plains program for multi-problem families succeeded in helping the Head of the Household and her/his family find a new start in life. There are two components. The first is a follow-up study of three groups of adults: those who applied but were not selected to participate in the program (control group), and of the randomly selected participants, those who completed the program and those who did not. A wide variety of outcomes (financial, social, personal, and community participation) will be examined. The families will be visited at six month intervals to obtain longitudinal data on their experiences after leaving Mountain Plains. The second part is a comparative study of other residential programs for multi-problem families of residential programs for the Head of the Household only, and of non-residential programs for multi-problem families. The purpose of this component is to compare the benefits/costs of Mountain Plains as one approach with the benefits/costs of other approaches. Interim reports will continue documentation of program activities, will describe improved measures of benefits and outcomes for participants, and offer preliminary information on the effectiveness of Mountain Plains.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Alternative Settings

Title: Cost-effectiveness Analysis of the Mountain Plains Education and Economic Development Rural Residential Career Education Program

Contractor: Dr. Ernest Stromsdorfer
Department of Economics
Indiana University
Ballantine Hall 901
Bloomington, Indiana 47401

Contract No.:	NIE Project Officer:
NIE-C-74-0102	Michael Hock
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $33,770.	5/12/74 - 12/31/74

Summary:

This study will evaluate the current cost-effectiveness of the Mountain Plains rural residential career education program. It has five broad objectives: (1) to evaluate the educational impact of the Mountain Plains program in terms of student educational achievement; (2) to evaluate intermediate project outputs on the post-program labor market experiences of participations; (3) to estimate project equilibrium operational costs; (4) to estimate project cost-effectiveness; and (5) to recommend changes that might be made in similar studies.

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NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
ABSTRACTS OF PROJECTS

IN PROGRAM AREA:

SYSTEMIC OR INSTITUTIONAL CHANGES

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Systemic or Institutional Changes

Title: State Level Study in Career Education

Contractor: Richard Ferrin
College Entrance Examination Board
888 Seventh Avenue
New York, New York 10019

Contract No.:	NIE Project Officer:
NIE-C-74-0146	Lance Hodes
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $104,385.	6/30/74 - 5/18/75

Summary:

Although Career Education has become a major educational innovation in the last few years and many State and local Education Agencies are conducting Career Education programs, little is known about (1) the nature and quality of the major elements and components of Career Education programs, (2) the linkages needed to insure that these elements and components are integrated, and (3) how to achieve effective coordination for K through adult career education opportunities. This project will examine and put into practice, if justified, the concept that one of the greatest practitioner needs is for linkages among the components of career education. The project will examine what is meant by Career Education in practice, identify the components of comprehensive Career Education opportunities (K through adult), study the linkages among components, and recommend ways in which NIE can provide information of greatest value to practitioners on how to strengthen career education linkages.

Internal and external consortiums will be organized to study five major linkage components: 1) education and work, 2) certification/credentialization, 3) institutional articulation, 4) financing, and 5) support services. The external consortiums will be composed of individuals knowledgeable about the state of the art of each of these components and representing a wide range of interest.

NATIONAL INSTITUTE OF EDUCATION
CAREER EDUCATION PROGRAM
PROJECT ABSTRACT

Program Area: Institutional or Systemic Changes

Title: Response to Educational Needs Projects

Grantee: Barbara Sizemore
District of Columbia Public School Board
415 12th Street, N.W.
Washington, D.C. 20004

Grant No.:	NIE Project Officer:
OEG-0-72-0168	George Sealey Jr.
Current Funding:	Duration of Current Award:
Fiscal Year 1974 $2,148,800.	6/30/72 - 9/30/75

Summary:

The District of Columbia Public Schools/Response to Educational Needs Project is an inner-city educational program designed to improve the educational achievement level of approximately 21,000 disadvantaged children in the Anacostia District of Washington, D.C. The project will emphasize improving the knowledge, skills, and attitude of the instructional staff through inservice training activities, mobilizing and coordinating the resources of the community, and developing improved reading and mathematics programs. Through this comprehensive and systematic approach to addressing existing problems it is hoped that a more effective and efficient total educational delivery system can be established.

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FISCAL YEARS 1973 AND 1974

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Dropouts and Graduates Five Years After High School: A Re-Survey of a National Sample of Young Men

Jerald Bachman
Survey Research Center
University of Michigan
Ann Arbor, Michigan 48108
(313) 764-8560

Duration: 6/27-73 - 8/31/75

Total Federal Funds: $158,667

Grant No. NE-G-00-3-0198

Project Officer: Ivan Charner
Phone No. (202) 254-5728

Objectives: The project will re-survey participants (now in their mid-twenties) from the 1966-1970 Youth in Transition Study, which followed a national sample of young men through high school and one year beyond. The study will:

1) Explore the long-range effects (especially occupational) of dropping out of high school.

2) Compare educational and occupational attitudes and experiences of high school dropouts, graduates and college students. Occupational characteristics such as status, pay, hours, satisfaction and previous work history are examined; attitudes toward education, race relations, government and the use of drugs are also assessed. The researcher will test the proposition that differences between high school dropouts and others grow greater the longer people are away from high school.

Methods and procedures: A longitudinal analysis of 2200 young men currently in their mid-twenties.

Significance for career education: In the transition from school to work, the high school dropout represents perhaps the most acute problem. Although the proportion of high school drop-outs has declined over the past few decades, the proportion of jobs available for such people has declined even more precipitously.

Status Differentiation and the Educational Complex in an Appalachian Community

Allen Batteau
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(606) 785-5230

Duration: 6/27/73 to 9/30/74
Total Federal funds: $9,259

Grant No.: NE-G-00-3-0066
Project Officer: David Goodwin
Phone No. (202) 254-5728

Objectives: The project is an anthropological investigation of the effects of rapid expansion of the educational system and other social services upon the social structure, status system, and values of rural communities in an Appalachian area (Knott County, Kentucky). In the past twenty years, great emphasis has been placed upon expansion of the educational system as the primary means of regional development and occupational mobility. Batteau hypotheses that the range of social differentiation in the community, along dimensions of wealth, occupational access, and orientation toward "modern" vs. "backward" values, has increased due to the growth of modern bureaucratic organizations such as schools. He suggests that the disjunction between traditional and modern sectors of the community has become more radical in the last twenty years, largely due to the expansion of educational and other modern institutions. If Batteau is correct, educational expansion may have increased the status disabilities of rural Mountain People by increasing mobility rates for some portions of the community, decreasing the frequency and forms of interaction between high status and low status persons in the community, and increasing disparities in wealth, income, and value orientations.

Procedures and Methodology: One year of fieldwork based in Hindman, Kentucky, and surrounding communities. Basic tools include participant observation, interviews, local surveys and life history analysis, census data, and other government records.

Significance for career education: Career education is largely concerned with socialization, value changes, and of course, the impact of education upon orientations toward work and the economic sector.

The Role of Education in Socio-economic Achievement: A Comparative Study

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University of Chicago
1126 East 59th Street
Chicago, Illinois 60637
(312) 753-4792

Duration: 10/1/73 - 9/30/76 Total Federal Funds: $70,851

Grant No.: NE-G-00-3119 Project Officer: Nevzer Stacey
(202) 254-5649

Objectives: The objective of this study is to compare the effect of education (including extra-school education) upon socioeconomic achievement in Japan and the United States. The study will assess:

1. The manner in which resources such as cognitive skills, personality and money affect career decisions and achievement within similar occupational categories.

2. Differences in perceptions of the occupational hierarchy among segments of the population.

3. The effect of employer practices upon socio-economic achievement.

Procedures: Much previous comparative study of socio-economic achievement has suffered from a lack of standardized measures by which to make precise comparisons. The present study will coordinate an on-going Japanese national survey of social mobility with the current work of Robert Hauser and David Featherman/University of Wisconsin (Occupational Changes in Generation Survey). In addition, the study will a) reanalyze data from a 1965 Japanese study of occupational achievement and a 1965 NORC (National Opinion Research Center) survey of occupational prestige, b) review existing studies of elite-status attainment, and c) further investigate Mary Jean Bowman's "three societies hypothesis"--in which the occupational status hierarchy is perceived differently among agricultural, organizational and entrepreneurial segments of society.

Significance for Career Education: The study will improve our understanding of the socio-economic achievement process in post-industrial, democratic societies. It will also suggest the way attempts to facilitate equal opportunity through education affect occupational attainment.

State Budgeting for Higher Education Practice and Theory

Dr. Lyman A. Glenny
Center for Research and
Development in Higher Education
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(415) 642-7509

Duration: 6/27/73-6/30/76 Total Federal Funds: $341,620

Grant No: NE-G-00-3-0210 Project Officer: Lance Hodes
Phone No. (202) 254-6057

Objectives: State budget formulation is an important process that is seriously lacking documentation. State budgeting agencies are under heavy pressure to improve budget practice in relation to higher education, despite uncertainties surrounding the effectiveness of existing budgeting techniques and policy formulation. The increasing competition for state revenues, the lack of increases in productivity, the redistribution of enrollments among institutions, the demands for cost and productivity information and the incongruity between educational expectations and available resources - all place strains on the budgeting process. Information regarding this process is scattered and not readily available. Therefore the major objective of this study is to provide information and guidelines to improve state budget formulations for postsecondary educations. A second objective is to test certain theoretical concepts in interorganizational cooperation, Program Planning and Budgeting Systems, Management by Objectives and others in order to develop a theory about resource allocation processes.

Methods and Procedures: The study will conduct a field investigation in 18 states supplemented by a questionnaire survey of all 50 states. Selected propositions of organizational theory will be tested with data collected in the field investigation. The study is a three year effort that will provide state level policy makers with a broad perspective of budget formulation across all of its elements. The project will provide the context for later, more informed assessments of the separate elements of budget formulation.

Significance for Career Education: The information and guidelines developed from this study will play an important role in building a state system for the delivery of career education. This system is to be one of the priorities for career education during the next few years. It will include postsecondary education as one of its elements, and a thorough knowledge of state budgeting policies and practices for higher education is a necessary component of the total system.

Legal Constraints to External Higher Education Degree Program, with Statutory Models for Reform and Regulation

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Washington, D. C. 20036
202-872-1960

William Kaplin
Columbus School of Law
Catholic Univ. of America
Washington, D. C. 20017

Duration: 6/27/73-6/26/74

Total Federal Funds: $38,390

Grant No: NE-G-00-3-0208

Project Officer: Nevzer Stacey (Phone No. 254-5654)

Objectives: The study focuses upon the legal constraints to external higher education degree programs and is divided into three (3) parts:

a. analysis of the role of states and state regulations.
b. a legal analysis of the role of accreditation associations in external degree programs, and of the legal issues surrounding the involvement of proprietary institutions.
c. legal issues concerning the governance of external degree programs.

The study will also examine the impact of legal constraints upon the actual operations of external degree programs. In response to legal issues raised, the study also suggests statutory and procedural reforms for the orderly expansion of external higher education degree programs.

Methodology and procedures: Using traditional legal research sources--statutes, cases, law review articles and journals, an information matrix will be developed in each of the three areas of investigation. This will be supplemented by a limited field research phase, in which a sample of external degree programs are carefully scrutinized.

Significance for career education: External degree programs are one approach to providing recurrent education for adults. Issues related to state regulation, certification and governance are significant obstacles to the viability and expansion of such programs.

Schooling, Training and Experience: Econometric Investigations of Determinants and Returns

Zvi Griliches and Richard Freeman
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1737 Cambridge Street, Room 508
Cambridge, Massachusetts 02138
617-495-2181

Duration: 6/27/73-8/31/76 Total Federal Funds: $165,500

Grant No. NE-G-00-3-0202 Project Officer: Robert Stump
(Phone No. 254-5310)

Objectives: The study focuses upon the effects of work experience and interruptions of schooling upon educational attainment and subsequent labor market success. The interaction between family social background, ability, schooling and work experience is examined. The major issues are:

1. Costs to academic achievement of part-time work and returns from such work experience in terms of subsequent job success.
2. Economic costs of interrupted schooling prior to entry into college.
3. Economic returns to schooling, differentiated by types of education, age, family and ability factors.

Procedures and methodology: Analysis of National Longitudinal Survey (Parnes) data on 4 cohorts of young and middle-aged men and women. Census data allows matching of family members on educational and occupational factors.

Significance for career education: A major focus of career education is the educational factors which determine getting a job, holding it, and advancing between jobs. Some recent studies suggest, however, that education has peripheral impact upon labor market outcomes. Griliches and Freeman will help to confirm or disconfirm the wisdom of a career education model predicated upon the economic payoffs from education.

A History of Adult Degree Programs, 1945-1970

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College of Continuing Education
Roosevelt University
430 South Michigan Avenue
Chicago, Illinois 60605
(312) 341-3860

Duration: 6/27/73 - 9/30/74 Total Federal Funds: $9,997

Grant No. NE-G-00-3-0199 Project Officer: Nevzer Stacey
Phone No. (202) 254-5654

Objectives: To date, no comprehensive record of the origins, successes, and shortcomings of baccalaureate programs for adults has been compiled. Between 1945 and 1970, at least nine such programs have been instituted around the country. These programs differ from conventional baccalaureate programs in that:

1) Enrollment in them is restricted to adults as defined by some minimum age requirement.

2) The instructional style and curricular content and/or curricular organization is said to be more appropriate for adults than those of conventional programs.

3) A mechanism is provided to assess "life experience" as it might relate to degree requirements.

The study examines the origins of the adult degree concept, variations in the establishment and organization of specific programs, evolution in staffing patterns, enrollment, administration, and curriculum.

Procedures and methodology: The study employs historical methodology. Evidence elicited from primary and secondary documents and from interviews with key administrators and faculty members involved in the evolution of the concept of adult degree programs and their establishment on the nine campuses forms the basis for the report.

Significance for career education: Central tenets of career education are:

1) In part, education ought to prepare students for the world of work and career decision-making.

2) The world of work is a significant source of learning. Adult degree programs recognize the value of experiential learning.

3) Mid-career adults should have opportunities for entry and re-entry into educational programs.

4) Educational programs in general and career educational programs in particular should strive to provide both instruction and curricula based on the economic and psychological needs of mature students.

Education and Social Structure: An Historical Study of Iowa

Richard Jensen
Director, Family History Program
Newberry Library
60 West Walton Street
Chicago, Illinois 60610
(312) 649-1224

Duration: 9/1/73 - 8/31/75
Total NIE Funds: $85,421

Grant No. NE-G-00-3-0067
Project Officer: David Falk
Phone no. (202) 254-5054)

Objectives: This study of historic data seeks to discover the distribution of educational attainment according to age, ethnicity, religion, family size, occupation, income, wealth, and community type. In addition, the study will attempt to estimate the importance of education (and other variables) in determining income, wealth, and socio-economic status.

Procedures and Methodology: The study will use the Iowa state census of 1925, together with the state census of 1915, as well as earlier censuses and vital records as data for the analyses. Correlational methods will be used to estimate the historic path equations for socio-economic status.

Significance for career education: With the supply of educated citizens increasing so rapidly in recent decades, the problem of underemployment is of major concern. The historical data in this study can be compared to more contemporary data sources to detect changes in the role education plays in shaping individual occupational, economic, and social outcomes.

Simulated Occupational Choice: A Criterion of Competence in Career Decision-Making

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Duration: 6/27/73 - 8/31/75 Total Federal Funds: $101,034

Grant No. NE-G-00-3-0216 Project Officer: David Hampson (phone no. 254-6009)

Objectives: The study continues developmental work on a simulation instrument to assess competence in career decision-making. The study emphasizes decision-making processes rather than specific outcomes or understanding of decision-making concepts per se. It includes measures to assess the comprehensiveness and effectiveness of choice processes. The immediate target population is high school seniors.

Procedures: The study includes plans for development, pre-test, formative evaluation, revision, and summative evaluation on a sample of 200 high school seniors.

Significance for career education: The instrument promises to be particularly useful as a criterion measure for assessing the effects of career development and guidance programs, experimental career education programs, and other activities aimed at increasing competence in career decision-making.

Sex as a Factor Influencing Career Recommendations of Public School Guidance Counselors

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Duration: 6/27/73-10/30/74 Total Federal Funds: $9,691.31

Grant No. NE-G-00-3-0211 Project Officer: Mary Lou Randour
(Phone No. 254-6057)

Objectives: The study addresses three questions:

1. Does a student's sex alter the career recommendations of a guidance counselor?
2. Does sex interact with other student characteristics (school performance, occupational and educational aspirations, age, race, SES, parent expectations) to influence advice counselors give students.
3. Do counselor attributes such as sex, age, social background, professional training and experience influence career recommendations?

Procedures and methodology: The study involves a mail questionnaire survey of all junior and senior high school guidance counselors in Virginia. Data on career recommendations of guidance counselors will be collected through the use of hypothetical case histories. A second source of data involves intensive interview of 50 randomly sampled counselors.

Significance for career education: Sex bias is certainly one important obstacle to female mobility in the labor market. Career aspirations, planning and decision-making may be significantly affected prior to entering the labor market by the kinds of advice given by teachers and guidance counselors.

Educational Requirements for Industrial Democracy

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Duration: 9/1/73 - 8/31/76 Total Federal Funds: $158,941

Grant No. NE-G-00-3-0205 Project Officer: David Goodwin
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Objectives: The project will study the implications of various forms of work reorganization ("industrial democracy"), concentrating upon the demands placed upon the educational system and the possible responses of schools. The study involves parallel examination of schools and firms to check the correspondence between the educational requirements of industrial organization and the social skills and attitudes produced by schools. The researchers concentrate upon forms of work reorganization characterized by reduced hierarchies of authority, worker participation in management decisions regarding production and job requirements. It is hypothesized that industrial democracy will lead to less specialization in production tasks, increased worker initiative, and the demand for new patterns of socialization through schooling.

Procedures: The study involves parallel examination of:

1. Industrial demands for new kinds of workers as a result of 'democratic' work reorganization.
2. The production aspects of schools with regard to labor skills and personality traits that 'industrial democracy' demands.

The study includes literature survey and field study of firms in the United States and abroad which have experimented with substantial degrees of industrial democracy.

Significance for career education: The connection between changing work requirements and forms of school productivity, attitudes toward authority, rules, hierarchy, decision-making skills, etc., suggests an evolving relationship between education and the world of work. Special attention will be given to the relevance of the most prominent types of educational reform for changing the educational characteristics of workers in order to meet the new work requirements.

The Role of Women in American Society

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Duration: 6/27/73 - 9/30/74 Total Federal Funds: $54,646.50

Grant No. NE-G-00-3-0215 Project Officer: Mary Lou Randour
(Phone no. 254-5654)

Objectives: The program will develop a pilot film to serve as the basis for one curriculum unit of a planned semester course for high school students. Together with related teaching materials (the preparation of which is funded by the Ford Foundation), the film will illustrate some of the decision points in women's lives, focusing, in this instance, on the lives of a group of girls just entering puberty and subject to pressures of socialization at home and at school that affect their career choices. The total course, of which this is one part, is intended to include ten films and their supporting materials for teachers and students. Its goals are these:

1. To help young people, particularly young women, understand the consequences of some of the life choices they may make so that they may make informed and purposeful decisions.
2. To challenge existing sex role stereotypes held by men and women and provide alternative role and career models.
3. To compare the relation between female experience in the United States in the 1970's and that of other periods and cultures.
4. To identify some of the universal experiences in women's lives so as to combat the sense of isolation and helplessness adolescent females often feel, and thereby strengthen their confidence to act responsibly.

Significance for career education: The role of women in American society, relation between education, occupational choice, family and marriage decisions is a significant area of educational concern.

The Impact of Colleges and Universities on Educational and Occupational Aspirations of Women

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Duration: 6/27/73 - 1/30/75   Total Federal Funds: $9,976

Grant No. NE-G-00-3-0200   Project Officer: Ella Johnston
(Phone No. 254-3806)

Objectives: The study compares the differential effects of attending college or university upon the educational and occupational aspirations of men and women. Two theories of level of aspirations are tested--theories of 'relative deprivation' and 'environmental press'. Such institutional characteristics of colleges as sexual composition of the student body, whether a school is male, female or coed, and the selectivity of admissions criteria are the primary independent variables. Family background characteristics, ability levels, attitudes toward marriage and family are controlled to isolate the effects of college. The study examines changes in undergraduate educational and occupational aspirations from freshman to senior year.

Procedures and methodology: The analysis uses existing longitudinal data developed by the American Council on Education. Approximately 60,000 1966 freshmen were followed up at the end of their first year, junior and senior years.

Significance for career education: The study should yield significant findings about the impact of the college experience upon men and women as well as the operation of various social reference groups. Understanding these effects should be of value to educational planners as well as counselors.

Toward a Temporal Sequence of Educational Attainment -- Career Contingencies of Youth: The First Three Post-High School Years

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Duration: 9/1/73 - 8/31/75	Total NIE Funds: $27,639
Grant No. NE-G-00-3-0217	Project Officer: Ivan Charner Phone No. (202) 254-5728

Objectives: The study examines pre and post high school graduation characteristics, educational and occupational experiences, aspirations, expectancies and achievements of students in the southern tier of New York State. Beginning with 2790 high school freshmen, the principal investigator has recently completed a fifth wave of sampling on students who are approximately three (3) years out of high school. The study will emphasize:

1) The cost of continuing education beyond high school and sources of financing related to family status, ability and type of post-high school education.

2) Use of the two-year college as terminal education and/or transmission link between high school and four year college.

3) Factors related to the non-completion of high school, non-continuation beyond high school and probability of entry into some form of higher education.

4) Probability of entry into higher education after a hiatus following high school graduation.

5) The degree to which each of these four processes differ between males and females.

Methods and procedures: Use of path analysis to examine a five wave longitudinal data base.

Significance for career education: This study represents a useful addition to other longitudinal studies on the interplay between social background, educational and occupational experience. In particular, the short-time intervals between measurement panels should provide a more detailed understanding of the dynamics of the career choice and development process; the concern with the role of the two-year community as a link in the career process should increase our knowledge of the functioning of an educational institution that each year enrolls a larger percentage of the nation's post-high school youth; while, finally, the separate analyses for males and females should enhance our understanding of how the career choice and development process differs between the sexes.

(Note: The researcher is also receiving partial funding from NSF. Of total NIE funds, $23,001 are for the study described above. The remainder are for coding and keypunching of additional data not used in this study; the latter is under the direction of the Office of Research/NIE).

The Vocational Choice Process of Non-Professional, Non-Managerial Workers

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Duration: 6/27/73 - 6/30/75 Total Federal Funds: $126,848

Grant NO. NE-G-00-3-0203 Project Officer: Lance Hodes (phone no. 254-6057)

Objectives: The principal aim of the study is to test the applicability of John Holland's theory of vocational choice (The Psychology of Vocational Choice) to non-professional, non-managerial workers. A series of hypotheses suggested by Holland's theory is contrasted with an 'accident theory' of vocational choice.

Holland's work constitutes one of the major theories in the area of vocational choice. To date, the major assumptions of this and most other theories of career choice, have been tested almost exclusively upon college students and professionals. School guidance counselors and vocational counselors, however, lack reliable information by which to assist the decision making of non-college bound youth.

Procedures and methodology: Holland's Vocational Preference Inventory and other measures of several vocational constructs will be used. A stratified sample of 1000 male and female workers will be selected for administration of the research instruments.

Significance for career education: The study identified a big gap in current theories of vocational choice. Theories of decision-making for non-college bound youth have been almost totally overlooked by researchers in the area. Consequently, guidance counselors are particularly hampered in advising and counseling such students.

The Impact of Educational Attainment on Fertility and Female Labor Force Behavior

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Duration: 6/27/73-8/31/75 Total Federal Funds: $92,021

Grant No. NE-G-00-3-0212 Project Officer: Ivan Charner
(Phone No. 254-5728)

Objectives: The inverse relation between schooling and fertility is widely documented, as is the direct correlation between schooling and earnings. This research attempts to estimate structural aspects of the labor market which underlie these simple associations. A major aspect of the study is the development of a model to predict the potential wage offers to women not currently in the labor market. This is not possible from existing analyses because women presently in the labor market are more likely to have invested in education than women not currently employed or looking for work. Three basic question are posed:

1. What are the costs and benefits of education in economic terms?
2. If women not currently working entered the labor market, would they receive benefits similar to those presently working?
3. What is the economic cost to women of bearing children?

Procedures: Use of simultaneous equations to analyze longitudinal data in Survey of Economic Opportunity and Income Dynamics Panel.

Significance for career education: Most studies of the relationship between schooling and earnings concentrate on men.

Economic Analysis of the Investment in Education

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Duration: 6-27-73 to 9-30-76

Total Federal Funds: $76,260

Grant No.: NE-G-00-3-0153

Project Officer: Howard Birnbaum
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Objectives: This study will examine the problem of the compatability between the benefits from education to the individual (private returns) and to society (social returns) in light of the egalitarian principles of American society. The approach consists of analyzing the role of education in the context of an economy in which the economic value of human time is increasing. The objective is to discover one best, or near best, allocation of resources to education in the U.S. economy where human time is scarce and where it is increasing in value. Special attention will be paid to the issues of time that is spent outside the labor market, e.g. housewife, and how education influences these uses of a person's time.

Methods and Procedures: The study has two parts. The first is to develop more fully the economic explanation of the secular increases in the economic value of human time. This largely theoretical endeavor will look at how education contributes to increase in the supply of quality attributes in persons and how education changes as the demand for these attributes changes. The second part will test this theory against the empirical evidence available to reconcile some of the apparent inconsistencies in the data and provide a more unified explanation of the economic role and effects of education. The empirical analyses are related to such areas as household production, changes by workers to follow changing job opportunities, especially geographical mobility, student decisions in the face of changing career opportunities, and adjustments by farmers as economic opportunities change.

Significance for Career Education: Discussions of the returns to education are central to the Career Education Program's concern for the relationship between educational experiences and experiences in the world of work. Of growing importance are the influences of education on non-market activities and in the adaptation of changes in career opportunities.

This research will include a discussion of policy and practice recommendations that will follow from the findings of the theoretical and empirical parts of the study. Possible areas to be addressed include the influence of education on individual decisions outside the labor market, and effects of changing career opportunities on individual decisions to pursue an education.

Education, Pay and Job Satisfaction

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Duration: 9/1/73 - 8/31/75

Total Federal Funds: $89,727

Grant No. NE-G-00-3-0213

Project Officer: Robert Stump
(Phone No. 254-5310)

Objectives: The study examines the relationship between preferences for earnings and job satisfaction among employees with different levels of education. The central question is: "Does educational background influence expectations about intrinsic satisfaction from work?" Hypotheses are that, among employees in the same job title, the desire to make the job more intrinsically satisfying will be stronger among employees who are younger, who have working spouses and/or fewer dependents, and who are more highly educated.

Procedures and methodology: Structured interviews with a stratified sample of workers belonging to District Council 37 of the American Federation of State, County and Municipal Employees Union, New York City. Sample will be stratified on the basis of occupation and education.

Significance for career education: The Forward Plan for Career Education Research and Development clearly states the central question in this study, "How much is career satisfaction worth in terms of income?"

Evaluation and Analysis of the Satellite Program in School District 21, New York City

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Duration: 9/1/73-6/30/75 Total Federal Funds: $6,450

Grant No. NE-G-00-3-0207 Project Officer: Mary Ann Millsap
(phone no. 254-5628)

Objectives: The study evaluates the effectiveness of four junior high school classes in the Satellite Program. The latter is directed toward students who are disruptive and aggressive in the regular classroom, defiant of authority, unable to relate to peers and exhibit severe personality difficulities which lead to learning disabilities. Participation in the Satellite Program lasts five (5) months, during which major elements in the treatment are group and individual counseling, vocational counseling, remedial instruction in basic skills, and heavy emphasis upon the use of multi-media materials. The key outcome measures in this study are reading, math and self-concept. Data is also collected on school attendance and guidance counselor ratings. The study includes a six month follow-up to assess the durability of program effects.

Procedures and methodology: Pre and post treatment tests on a sample of 45 randomly selected Satellite Program students. A randomly selected control group is also established. The key measurement instruments are Metropolitan Achievement Tests in Math and Reading, and Piers-Harris Children's Self-Concept Scale.

Significance for Career Education: The Satellite Program emphasizes career counseling and training experiences for 'hard to reach' youth. Although the study does not isolate the effects of such treatment, it may suggest the utility of providing community learning experiences through schools for disaffected youth.

The Relative Effectiveness of Proprietary versus Public Vocational Education

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Duration: 6/27/73-9/30/74 Total Federal Funds: $159,305

Grant No. NE-G-00-3-0204 Project Officer: David Goodwin
(Phone No. 254-5728)

Objectives: A study comparing the labor market success of graduates from proprietary and public vocational schools on seven outcomes:

1. initial salary
2. length of time before getting initial job
3. relatedness of first job to training
4. self-reported job satisfaction
5. promotions
6. geographic and occupational mobility
7. personal growth

In addition, differences in performance will be correlated with institutional factors such as placement activities, faculty salaries, advertising expenses, administrative practices, physical plant and equipment.

The central hypothesis is that graduates of proprietary schools will fare better in the labor market than will students graduating from public vocational schools. It is argued that factors related to the market mechanism and profit motive may facilitate the greater success of proprietary school graduates.

Procedures and methodology: Twelve hundred (1200) randomly selected 1973 graduates (in 6 occupational areas) from 51 randomly selected schools in 4 cities are followed into the labor market 3 months after graduation. Longer term effects are assessed by sampling 2000 1971 graduates from the same schools. Graduates from public and proprietary vocational schools are matched on a variety of demographic and entry level characteristics.

Significance for career education: Rapid expansion of community colleges represents a major educational investment in postsecondary career preparation. Comparison with competing private vocational schools may suggest the utility of this investment.

New Model for Youth Learning and Socialization

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Duration: 6/27/73 - 6/30/75 Total Federal Funds: $19,991

Grant No. NE-G-00-3-0219 Project Officer: Corinne Rieder
Phone No. (202) 254-5310

Objectives: The study suggests that the typical transition from high school to college frequently is made without considering alternatives. Some have suggested that this is due to inexperience in the world of work, age segregation and separation of youth from non-school learning situations. For students with college level ability, the absence of perceived educational alternatives to college is particularly acute--with resultant dropouts, dissatisfaction and anti-social behavior. The study involves a planning grant to design a program in which employers are subsidized to provide junior executive job training for high school graduates with college level ability.

Significance for career education: The study involves planning (not implementation) for a program directed toward the transition from school to work for students with college level ability.

FY 1974

RESEARCH STUDIES

An Empirical Estimation of the Impact of Alternative Post Secondary Educational Policies

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Duration: 9/1/74 - 2/29/76

Total Federal Funds: $66,296

Grant No.: NIE-6-74-0100

Project Officer: Charles Stalford
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Objectives: This project will explore possible ways to help women and children from low income families attain more education and have better and more satisfying jobs. The effect of government policies on the number of students from these groups who enter post-secondary education the type of schools they attend, their success in graduating and the subsequent course of their lives, including occupational success and marriage, will be studied. The project will investigate how possible changes in government policies, such as awarding more scholarships, changing the location of schools and changing the emphasis of vocational programs might help women and low income youth. Other considerations that will be emphasized are: (a) college availability, including cost, location and entrance requirements; (b) the quality of the high school and college attended and (c) the effect that background and ability of other, possibly better, students have on the decision to stay in school or college.

Special studies will also be made of the effect that schooling quality has on earnings for the general population, some factors determining enrollment of adults in undergraduate colleges and the long run efficiency of policies designed to increase the number of college graduates.

Methods and Procedures: The 57,000 eleventh graders who responded to follow-up questionnaires as part of Project Talent will provide the information base for most of the analysis. Project Talent is a long term investigation into factors affecting the development of youth in this country. Specific information used in this study will be obtained from questionnaires administered 1 and 5 years after the original Project Talent survey.

Significance for Career Education: The needs of women and low income youth are critical issues in the Career Education Program. Several other studies funded by the Program are also addressed to these needs. It is believed that women and low income youth face particular problems in reaching education and occupational goals and special attention to these problems is warranted. In addition, policies effecting the future of post-secondary education, some of which this study addresses, are important to the effective development of career education programs.

Effects of Education on the Occupational Achievement of Various Ethnic Groups

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Duration: 09-01-74 to 08-31-75

Total Federal Funds: $43,220

Grant No: NIE-G-74-0090

Project Officer: Christian Lotze
Phone no. (202) 254-5654

Objectives: The study will examine the effect of education on two measures of economic achievement--occupational status and earnings, for men and women of different ethnic groups. Questions to be addressed are:

- how large are the economic and social differences among different ethnic and minority groups?
- over time, have these differences narrowed or broadened?
- how large are the differences between young and old within and across groups?
- what effect does educational attainment have on these differences?

Procedure: Based on the 1/1000 sample of the 1970 Census, the study will compare the relationship between education and occupational outcomes for 13 ethnic groups, and consider such intervening factors as age, sex, location and marital status.

Significance for career education: The study will indicate which minority group can benefit most from more education, and whether they can benefit more at certain levels than others. A better understanding of such patterns can guide national policy in this area.

Educational Requirements for the Public Sector

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Duration: 9/1/74 - 8/31/76 Total Federal Funds: $27,665

Grant No: NIE-G-74-0078 Project Officer: David Goodwin
Phone no. (202) 254-5728

Objectives: The study compares educational and work experience requirements for employment in the public and private sectors. Specifically, the study compares a) levels of schooling required for similar occupational categories in the public and private sector, b) on-the-job training experiences available, and c) economic returns to education in the public and private sectors, with specific attention to the differential returns for blacks and whites, males and females. The study hypothesizes that average schooling is higher in the public sector than in the private sector, educational requirements for employment have risen more rapidly in the public sector from 1960-1970, the income pay-off to additional schooling is higher in the public sector, and that although blacks and women receive less pay than white males for similar types of work, the pay differentials are lower in the public sector.

Procedures: The study will consist of two (2) kinds of analysis:

1. Change in occupational distributions and educational requirements for broad occupational categories from 1960-1970 in the public and private labor markets, using the Census of Governments and population census special reports.

2. Test a public sector labor market model to examine the relationship between education, first job, income, training, experience and job mobility for various sex/race groups. This analysis will rely upon the 1/1000 sample from the 1970 population census and the National Longitudinal Survey conducted by Herbert Parnes at Ohio State University.

Significance for Career Education: The study will give insight into differences between the public and private sector labor markets in the rewards to education and training, with implications for training, education on the job and job mobility in segments of the labor market.

The Abandonment Rate and Causes of Abandonment of Innovations in Secondary Schools

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Duration: 3/15/74 - 9/15/75

Total Federal Funds: $9,893

Grant No: NIE-G-74-0005

Project Officer: David Goodwin
Phone no. (202) 254-5728

Objectives: The low durability of educational innovations is an increasingly recognized problem. Recent studies indicate that schools employ new organizational and pedagogical techniques much more frequently than is commonly thought. Relatively few innovations, however, are successfully implemented and persist beyond a brief trial period. This study will survey 3,700 high school administrators in order to assess:

a. The rate at which 31 selected educational innovations have been accepted in schools.

b. The rate of abandonment following trial of 31 innovations in such areas as school organization, curriculum, technology, and personnel.

c. Causes for abandonment of innovations during the years 1965 - 1973.

Procedures: An instrument has been developed to measure innovative practices in high schools. This questionnaire will be mailed to school administrators belonging to the North Central Association of Colleges and Secondary Schools.

Significance for Career Education: Although some would argue that high rates of innovation accompanied by low rates of durability represent a positive search for new methods, the result may also be wasteful expenditures, inflated expectations and diminished legitimacy for school reform. The proposed research addresses a significant void of concern to researchers and school practitioners alike. The study complements current research concerns of the Career Education Program. CEP has undertaken a study of the means by which six (6) school districts implement career education programs.

Performance Consequences of Sex Bias in the Content of Major Achievement Test Batteries

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Duration: 7/1/74 - 10/31/75 Total Federal Funds: $60,000

Grant No: NIE-G-74-0008 Project Officer: Mary Lou Randour
Phone No. (202) 254-5654

Objectives: The possibility of sex bias in tests has been discussed, but no systematic study has been made. This study will examine for sex bias the major achievement test batteries widely used in educational decision-making at both the elementary and secondary school level. Specifically, the objectives of this study are to:

1) determine the incidence of sex-oriented content in the tests, using both an explicit and an implicit definition of sex-orientation;

2) to identify specific item material which might be removed from consideration in scoring if the goal of reduced bias were sought;

3) to increase the awareness of test publishers regarding the role of content in test properties, together with recommendations for practices which reduce bias;

4) to evaluate observed sex differences in tests for their implication for instruction

Methods and Procedures: The proposed study will focus on elementary and secondary school tests of educational achievement. The tests used for analysis will be chosen from the following:

> Iowa Tests of Educational Development, Stanford Achievement Tests, Sequential Tests of Educational Progress. California Achievement Tests, Iowa Test of Basic Skills, Metropolitan Achievement Tests, and the SRA Achievement Tests.

The study will have three phases:

1) an analysis of sex-oriented content using explicitly defined references to the sexes and their roles;

2) an analysis of sex-oriented content using implicit definitions and judges' rating of the material;

3) an item-level data analysis, comparing the sexes and linking the data to the content characteristics observed in 1) and 2).

The study will differ from several previous studies in its scope and in its focus on item level data. Such data will consider not only differences in the absolute level of test success between the sexes, but variations in patterns of responses to items.

Significance for Career Education: Achievement tests are widely used in both elementary and secondary schools for placement of students to determine instructional level, and for educational and occupational counseling. The identification of sex bias in achievement tests will aid educators in providing services that expand, rather than limit, student goals and options.

Social-Psychological and Cultural Factors Related to Achievement and Aspirations of Urban Community College Students

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Duration: 7/1/74 - 6/30/77	Total Federal Funds: $90,825
Grant No.: NIE-G-74-0092	Project Officer: Michael Hock Phone No. (202) 254-5500

Objective: The number of community colleges and their enrollment has increased dramatically in recent years, but there has been limited research on characteristics of community college students and their relationship to achievement. Notably, much research concerning the process by which background, personality, and four-year college experiences influence adult educational and occupational attainment cannot be used to explain achievement/attainment processes among community college students.

This study will investigate the process by which social background (socio-economic status, race, and ethnicity) and personality characteristics (self-esteem, locus of control, fear of failure, and fear of success) have independent and interactive effects on college achievement, persistence in a specific program while in college, career choice, and post-community college educational and occupational attainment. Among the objectives of the study is the development of "profiles" of students who have various characteristics of high or low academic achievement, high or low occupational and educational aspirations, and who manifest persistence in programs which allow transfer of credits to formal four year colleges or who change to a vocational preparation program (as contrasted with students who drop out of community college programs).

Methods and Procedures: The study will be based on analysis of data from 2,100 entering freshmen in the City Colleges of Chicago. Beginning in fall of 1974, the study will follow students through two years of a typical urban community college program and a third year during which a large proportion of this group will be expected to have made initial occupational choices and entered the occupational force, or transferred to a four year college. Survey data will be collected in the fall of 1974, and follow-ups will occur in late spring of 1975 and annually thereafter. Occupational and educational aspirations, academic achievement, and persistence in college will be related to factors such as race, ethnicity, sex, age, socio-economic status of the students' family, student ability, and various personality and attitude variables.

Significance for Career Education: This research will seek to a) identify a cluster of personality characteristics and attitudes which will help to explain how students respond to the academic and non-academic demand of the community college environment, and b) further develop a model of the achievement process among urban community college students. Results of the study should enable practitioners to identify types of students who do not appear to be served in an effective manner by community colleges such as those represented in the sample and thus may offer a basis for the development of diversified opportunities for such students, more effective curricula for community college programs, and responsive student service programs within such settings.

Education, Expectancies and Employment of Women and Minorities

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Duration: 7/1/74 - 12/31/75

Total Federal Funds: $70,795

Grant No: NIE-G-74-0068

Project Officer: Ella Johnston
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Objectives: The study examines the educational expectations of adult women and minorities, the effects of prior educational and occupational experience on current expectations and the way in which perceived experiences impact upon the acquisition of "adult continuing" education. Recent research suggests that race and sex occupational differentials are not well explained by disparities between the aspirations of women, minorities and their white, male counterparts; rather, psychological perceptions of personal experiences often depress the realistic expectations held by women and minorities. Among the specific issues investigated are the relationship between:

1. Actual education, labor market experiences (including attempts to obtain additional education, training and/ better jobs) and the perceived barriers to mobility for male and female, black and white adults in and out of the labor force.

2. Education, job experiences and current expectations.

3. Expectations, other psychological attributes such as efficacy, and current occupational differences between sex and race.

Procedures: This study will analyze existing data collected by the Survey Research Center from a 1972 national sample of adult men and women. In addition to demographic and other personal characteristics, measures include past and present education and labor market experiences, perceived obstacles in the labor market, future aspirations and expectations.

Significance for Career Education: Very little data exists on women's and minorities subjective accounts of their experiences in the labor market, especially of attempts to improve employment status through additional education. In addition to institutional and financial barriers, the problem of expectations no doubt curtails the degree to which women and minorities are able to continue their education during adulthood, return to work, or enter new careers.

Effects of Social Class Backgrounds on the Career Commitment of Women Attending Non-Elite Colleges

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Duration: 8/1/74 - 1/31/76
Total Federal Funds: $13,629

Grant No: NIE-G-74-0041
Project Officer: Mary Lou Randour
Phone No. (216) 932-2382

Objectives: Most of the research related to women and careers has focused on middle-class and upper middle class women. While this research is valuable, more needs to be known about the aspirations and concerns of working class women. This study will examine the relation of parental socio-economic status to female role conceptions and how this influences educational and occupational aspirations and career commitment.

Methods and Procedures: Two-hundred and eighty-nine (289) white women attending non-elite colleges will be sampled.

Each student will be given a questionnaire to assess educational and occupational aspirations, expectations, and values; conceptions of female roles; description of important role models; family socialization practices; self concept; behavior in dating and academic situation; detailed life style plans; and objective information about family background, school experience, and academic performance.

An analysis of the data will examine if there are social-class based differences in attitudes, support structures, and decision-making process related to career commitment. The specific mechanisms that effect social class differences will be distinguished, if such differences are found.

Significance for Career Education: Proper counseling for planning education programs and career guidance can only be provided if there is an understanding of the characteristics and needs of the population to be served. This study will help determine what factors should be considered by counselors and others when providing services to working class women.

New Estimates of the Effects of Family Background, Test Scores, Personality, and Years of Schooling on Economic Success.

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Duration: 7/1/74 - 12/31/75

Total Federal Funds: $99,464 (Joint Funding from NIE--$49,732, and Manpower Administration, U.S. Department of Labor $49,732

Grant No.: NIE-G-74-0077

Project Officer: Howard Birnbaum
Phone no. (202) 254-5310

Objectives: The proposed research will continue the investigations begun by the principal investigator and reported in Jencks, et. al. *Inequality: A Reassessment of the Effect of Family and Schooling in America*. The proposed research will address the following questions:

1. How large are the overall effects of family background on educational attainment, occupational status, and incomes?
2. What specific family characteristics contribute to education and occupational attainment?
3. How does family background influence success in each of these areas? (Those listed in no. 1)
4. How much effect do cognitive skills have on education, occupation, and income?
5. How do test scores exercise their effect?
6. How much effect do selected personality traits have on subsequent educational attainment and economic success, and how do personality traits exercise their effect?
7. How much does educational attainment affect economic success, and how is this effect exercised?

8. How much effect does individual economic success have on selected measures of overall economic and social consumption or well-being?

Methods and Procedures. The analysis of these questions will be based on data sets that were not available to the researchers at the time of the original study. They include: (1) the OEO Panel Study of Income Dynamics (PSID), (2) the Project TALENT 11-year Follow-up Sample (11th. grade cohort), (3) the TALENT Twins and Siblings sample, (4) the Kalamazoo Brothers Sample, (5) and the NORC Brothers sample. These surveys gathered data superior to that previously available, especially with respect to the effect on economic success of family background, test scores prior to school completion and personality traits in high school.

Significance for Career Education: The basic questions are central to the Career Education Program goal of improving our understanding of the relationship between education and work. As the principal investigators state in their proposal, "Our new data are not perfect, of course, and we are not so naive as to suppose that they will resolve the questions we have posed in any definitive way. The data will, however, narrow the range of uncertainty about each, often substantially."

Life History Data on the Occupational Effects of Obtaining Educational Credentials through Alternate Routes

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Duration: 11/1/74 - 10/31/75 Total Federal Funds: $9,788

Grant No: NIE-G-74-0097 Project Officer: Teresa Levitin
Phone no. (202) 254-5806

Objectives: The project will (1) describe patterns of attaining educational credentials through non-standard routes; (2) describe who uses such alternative routes; (3) describe the occupational effects of using these non-standard routes; and (4) provide a general purpose computer storage and retrieval program to deal with the life history type data used to understand these non-standard patterns. A substantial number of Americans acquire educational credentials through routes other than continuous full-time schooling (e.g., high school equivalency programs and post-secondary external degree programs), but little is known either about these routes or about the occupations that result.

Methods and procedures: Data will be drawn from the life history sample collected at the Center for Social Organization of Schools. The sample of 1,589 men contains retrospective data on the attitudes and activities of respondants from age 14 to the time of the survey. The educational and occupational histories of wives are also included.

Significance for career education: This study fits into career education concerns with describing and understanding the correlates and consequences of alternative educational patterns. Neither the occupational nor the personal results of nontraditional educational patterns are known. Additionally, the study of wives will provide insights into relationships among educational, familial, and occupational variables.

Moral Development and Life Outcomes

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Duration: 9/1/74 - 5/31/76 Total Federal Funds: $46,762

Grant No: NIE-G-74-0096 Project Officer: Judy Siegel
Phone no: (202) 254-5654

Objectives: The objective of the study is to test the hypothesis that the level of moral judgment attained during late adolescence predicts life outcomes as measured by job status, earned income, job satisfaction, and life satisfaction. In previous research of different cultures, Kohlberg found a progressive sequence of 6 moral stages. He defines developmental moral education as "... the stimulation of the child to take the next step in the direction it is natural for him to move." It is expected that the attainment of higher stages of moral judgment by late adolescence will be a better predictor of life outcomes than adolescent I.Q., school achievement, or vocational skills.

Procedures: Two groups of subjects will be investigated. The first sample will test moral development and life-outcome among parents and their older children, ages 21-30. The second test sample of 50 males will examine the temporal relations of adolescent moral level to subsequent adult life outcomes. The basic analyses are correlational, i.e. the correlation of moral maturity with job status, job satisfaction, and life satisfaction. (Covariance due to I.Q., high school achievement, and socio-economic status will be controlled).

Significance for career education: If the hypothesis is confirmed, the study will provide theoretical and empirical support for development of elementary and secondary school curriculum which enhances moral judgment, and thus, subsequent life outcomes.

The Development of Career Awareness in Children

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Duration: 6/15/74-3/31/75 Total Federal Funds: $56,108

Grant No: NIE-G-74-0057 Project Officer: Mary Lou Randour
Phone No. (202) 254-5654

Objectives: The range of occupations held by minority groups and women tend to be in a fairly narrow range and relatively restricted to lower status occupations. This study seeks to understand the development course of occupational awareness of children, ages 4-10, tracing its development into adolescence and adulthood, with a focus on women and minority groups. Information from this study will suggest intervention strategies designed to broaden career options for all.

Methods and Procedures: The study involves:

(a) Literature review: The review will be organized around the topics of career awareness in young children, the influence of such agents as parents, peers, schools, and media on career awareness, the impact of various combinations of influence by these agents, and the development of relevant personality characteristics and of conceptions of appropriate sex roles and race roles.

(b) Review of programs and products: A survey of existing career education materials and programs will be conducted. The survey will examine those programs and products which have focussed on presenting a diversity of occupational roles and those designed to increase aspirations.

(c) Conference: A conference of educators, government officials, and developers of career education materials will be held. Participants will be asked to focus upon the results of the literature review and review of programs and products, relating their own experience to the papers to provide comment, criticism, additional information, and alternative interpretations and orientations.

Significance for Career Education: This study will fill a significant void in current research on career awareness in children. Although some research has been undertaken, no one has yet "pulled it together", and analyzed it for its program development implications. Despite considerable evidence that many adult attitudes reflect early childhood experiences, most career education programs (including those supported by NIE) are directed toward adolescents and adults. The focus upon the interaction of sex and race roles with the development of career awareness adds to the significance of this study.

Evaluating the Returns to the Education of Women

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Duration: 09-01-74 to 08-31-75

Total Federal Funds: $25,843

Grant No: NIE-G-74-0094

Project Officer: Christian Lotze
Phone no. (202) 254-5654

Objectives: The general purpose of the study is to analyze the economic basis of the pattern of female educational attainment. Economic forces such as labor market prospects, the usefulness of education for production in the household, and family financing of education for male and female children are studied. The analysis will explain the differences in the distribution of education for males as a group, and for females as a group.

Procedure: The economic returns to education will be analyzed in terms of two components: (1) market returns as measured by changes in earnings; and (2) non-market returns as measured by changes in productivity within the home. For the latter, measures will be developed to determine the effect of education on household productivity. The National Longitudinal Survey of Labor Force Behavior serves as the data base for analysis.

Significance for career education: Measurement of the economic benefit of education of men and women is pertinent to decisions about the level of both public and private expenditure on that education. Measurements of the non-market returns of education to women have heretofore received little formal attention; knowledge of these will serve to explain career choices of females. Such measurement is of further use in indicating how government expenditures on education, as opposed to other programs, could narrow the sex wage differential.

Effectiveness of Model Office, Cooperative Office Education and Office Procedures Courses Based on Employee Satisfaction and Satisfactoriness One Year After Graduation

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Duration: 7/1/74 - 3/30/75
Total NIE Funds: $13,288

Grant no: NIE-G-74-0089
Project Officer: Judy Siegal
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Objectives: Three alternative office education courses currently exist in high school: model office (simulation), traditional office procedures, and cooperative office education combining classroom with on-the-job instruction. The major objective of this study is to follow-up graduates from each of the three identified programs in Minnesota one year after graduation, to determine the relative effectiveness of the programs based on employers' judgments of satisfactoriness and of employees' judgments of satisfaction. Additional objectives will include the determination of relationships between satisfaction and satisfactoriness of graduates from the three programs, and the relation of both with numerous personal characteristics examined in an earlier study of the same students. The study assesses the relationship between various modes of training and occupational satisfaction/performance, controlling for ability, and social background traits of students. These data will permit a broad evaluation of the three types of programs using on-the-job measures of performance.

Procedures: The previously surveyed students in model, traditional and cooperative office education courses will be followed into the labor market one year after graduation. Subjects will receive a personal information questionnaire and the Minnesota Satisfaction Questionnaire will be mailed directly to immediate supervisors for completion.

Significance for career education: Both simulation and cooperative training programs are very expensive to initiate and maintain, yet little research has been undertaken to determine the effectiveness of such programs in preparing students for the world of office work. The results of this study will permit a) a better match between types of vocational training and student needs, and b) recommendations to policy-makers in allocating resources among alternative approaches to office training.

Education and the Social Structure of an American City: Providence, Rhode Island, From 1885 Through 1925

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Duration: 7/1/74 - 8/15/76	Total Federal Funds: $29,824
Grant No. NE-G-74-0075	Project Officer: Ella M. Johnston Phone No: (202) 254-5458

Objectives: This study examines the way in which educational attainment shaped patterns of social mobility in American history. The study focuses upon 1885-1925 in Providence, Rhode Island, a period of great changes in the population of American cities and during which the amount of education received by typical city dwellers increased substantially. It will thus be possible to assess the relationship between education and mobility at various times and to consider the effects of educational supply upon occupational attainment.

Among the questions addressed are a) does increase in levels of school attainment diminish economic returns to the educated?, b) what kinds of high school programs--academic, vocational, parochial, contributed most to occupational mobility?, c) what significance did education play in the mobility of women and immigrants?, d) how did economic conditions such as depressions effect the returns to education?

Procedures: Data will be collected from various sources in the Providence area, including school records, census schedules, tax books, newspaper listings of grammar and high school graduates, and state marriage license forms. Samples will be selected from high school students in 1885, 1900, 1915 and 1925. Students will be traced through school records and tax books, and forward to sources indicating their occupation and property holdings in later life.

Significance for Career Education: Despite emphasis upon education as a means of promoting social equality and mobility throughout American history, and close scrutiny of the issue in contemporary society, quite little is known about the historical relationship between education and economic mobility in American society. The study will inform current concerns of the Career Education Program regarding the extent to which a) schools help individuals, particularly those at the bottom of the social hierarchy, b) educational credentials required for jobs shift with increased supply of educated manpower.

The Utilization of Postsecondary Education in Careers

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Duration: 9/1/74 - 8/31/75

Total Federal Funds: $53,989

Grant No. NIE-G-74-0091

Project Officer: Teresa Levitin
Phone no. (202) 254-5806

Objectives: The project will primarily utilize information from the American Council on Education's survey of college freshmen. The study was first done in 1961, and follow up data were gathered in 1965 and 1971. This study will:

1. Seek to determine the factors associated with employment in careers that are either related or remote to an individual's field of study in college. Some people work in jobs that are closely related to what they studied in school; others have jobs that are remote from what they studied in school. This study will begin to explore how the quantity, quality, and field of one's education are related to career choice and development.

2. Explore the relationship between the use of education in careers and other employment outcomes, including earnings and job satisfaction.

Procedures and methodology: The American Council on Education data file is based on a nationally representative, stratified sample of 127,212 men and women at 248 institutions. Follow-up samples comprise about 60,000 of the original freshman. It is a rich and comprehensive file. In addition, the Ohio State National Longitudinal Survey of women aged 30 to 44 and the National Research Council Roster of Doctorate Scientists and Engineers will be analyzed where appropriate.

The study will develop ways both to classify jobs into related or remote categories and to identify patterns of entry into those jobs.

Multivariate analysis techniques will be used to develop and test models that explain what type of job is selected and what the outcome of such selections are for different individuals.

Significance for Career Education: This study will provide information about the relationship of various fields of formal education to future employment. It will determine how the specific knowledge gained in college and/or the general experience of attending college are utilized in obtaining employment. This study will make an important contribution to the central focus of the career education program on the relationship of education to work.

Fifteen Years After High School--The Impact of Adolescent Social System on Subsequent Occupational Achievement

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Duration: 5/20/74 - 1/20/76 Total Federal Funds: $164,640

Grant No: NIE-G-74-0006 Project Officer: Ivan Charner
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Objectives: This project involves a fifteen (15) year follow-up of students originally surveyed in James Coleman's study of high school Adolescent Society. It will assess the effects of adolescent social structure, values and attitudes upon subsequent occupational achievement. The initial baseline survey of 10,000 midwestern male and female high school students contains rich data on social values and attitudes, educational aspirations, ability, experiences, and the high school social structure. The principal investigator will examine the relationship between these variables and labor market entry and progression during adulthood.

Procedures: A fifteen (15) year longitudinal follow-up of 10,000 students, combining mailed questionnaire and telephone interview techniques. Statistical techniques include path and markov chain analysis.

Significance for career education: This study will contribute significantly to knowledge about career decision-making because:

a. It focuses upon the occupational attainment of women, and compares female patterns of career-decision-making with a similar sample of males.

b. The fifteen year follow-up reaches further into patterns of mid-career development than most other longitudinal studies.

c. It emphasizes the effects of high school peer groups upon occupational attainment during adulthood.

Noncompleters in Public and Proprietary Schools

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Duration: 10/01/74 - 9/30/76

Total Federal Funds: $173,951

Grant No. NIE-G-74-0076

Project Officer: Mary Ann Millsap
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Objectives: The proposed study will measure the ability of proprietary and public schools to retain students long enough to teach them a marketable skill.

In earlier studies by Wilms, differences in the labor market success of graduates from proprietary and public vocational schools were compared and correlated with institutional factors such as placement activities, faculty salaries, advertising expenses, administrative practices, physical plan and equipment. The central hypothesis was that graduates of proprietary schools will fare better in the labor market than will students graduating from public vocational schools. Since the non-completion rate for public schools is so high--the most conservative estimate is 50 percent non-completion within two years--the present study will be undertaken to look specifically at the skills acquired by non-completers.

Procedures and Methodology: Some 1,578 students who entered 6 fields of occupational training in 50 public and proprietary schools (in four metropolitan areas) in the fall of 1973 will be followed until they leave school permanently and withdraw from the labor market, become employed or transfer to a four-year college. In the analysis, differences in students' backgrounds and abilities will be controlled.

Significance for Career Education: Rapid expansion of community colleges represents a major educational investment in post-secondary career education. If it can be shown that proprietary (profit making) vocational schools are more successful in teaching students marketable skills and placing them in related employment, consideration might be given to increasing investments in these proprietary schools, or incorporation of successful components of proprietary school education within community colleges.

Cut along this line for removal and mailing

YOUR OPINIONS have helped us shape our Career Education Program. We would like to continue to hear from you. This flap can be torn off and mailed to us postpaid. Would you take a few moments to answer these questions?

1. WHAT DID YOU FIND MOST HELPFUL ABOUT THIS DOCUMENT?

2. WHAT WAS LEAST HELPFUL?

3. DID YOU RECEIVE YOUR PREVIOUS PROGRAM PLAN (FORWARD PLAN FOR CAREER EDUCATION RESEARCH AND DEVELOPMENT) PUBLISHED IN APRIL 1973? YES ☐ NO ☐

4. DO YOU HAVE ANY FURTHER SUGGESTIONS ON HOW WE COULD IMPROVE OUR PROGRAM TO SERVE YOU BETTER?

YOUR NAME AND ADDRESS (Optional)

REMEMBER: Additional information on these projects discussed above can be obtained from the contractor or the NIE project officer.